INSPIRE IN HEALTHCARE

1. <u>Ophthalmology</u> / <u>Neurosurgery</u> / <u>ENT</u> / <u>Dental</u>

1. HD & 4K Cameras and Recording System for Surgical Microscopes-IKEGAMI
2. Medical Grade Surgical HD Monitors "21.5 & 26" Inch-IKEGAMI

2. <u>Surgery</u> (Urology, Laparoscopy)

1. HD Recording & Documentation System – IKEGAMI
2. 4K Recording & Documentation System – MEDXCHANGE
3. Non-Medical Grade HD Recorder - Vision Med
4. Streaming & Archiving
5. Medical Grade Surgical HD Monitors

3. <u>Radiology</u>

1. Apple Osirix Based Work Station
2. Clinical Review Monitors - LG

4. <u>Apple for Medical Professionals</u>

1. Apple Laptops
2. Apple Desktops
3. Apple iPad

5. <u>Medical Education</u>

1. Content Management System-MedXchange
2. Streaming System-VisionMed

6. <u>Integrated Operating Room -VisionMed</u>

Ikegami

MKC-210HD
1CMOS FULL HDTV
Medical Grade Camera

HD *High Definition*

1920 X 1080

- Newly Developed 1/3-inch FULL HDTV (1920x1080) CMOS chip
- High Resolution: Horizontal 900 TV lines, S/N50dB
- High Sensitivity: F7 at 2000lux
- Ultra Compact Camera-Head: W31xH31xD36mm
- Excellent Operability for Use in the Medical Field

Camera Head (Actual Size)

MKC-210HD
1CMOS FULL HDTV
Medical Grade Camera

HD High Definition
1920 X 1080

Ultra Compact Camera-Head
The camera-head is extremely small (W31xH31xD36mm) and lightweight.

High Resolution and High Sensitivity
The MKC-210HD employs a 2.2Mega pixel 1/3-inch CMOS Sensor to provide 900 lines of high resolution video image, high S/N ratio of 50dB and high sensitivity of F7/2000lux.

Digital Processing
Video signal processing is done in the same signal process as Ikegami's broadcast cameras to constantly achieve the same high level of quality and reliability.

Various Types of Video Signal Outputs
Equipped with several video signal outputs such as digital HD signal (HD-SDI), DVI digital signal (1920x1080), NTSC/PAL composite signal (VBS) and S-VIDEO to deal with various types of signals.
Adding one more channel of DVI output is available as an option.

Automatic Electronic Shutter System (Shutter Iris)
Electronic shutter (Shutter Iris) functionality maintains the optimized performance in a variety of situations.

Automatic Iris Control
Accurate iris control is possible with Auto-iris camera adaptors and Auto-iris lenses.
* This is used for the shadowless lamp system.

Picture Freeze
Pressing the Freeze button on the CCU panel will hold the current image. This allows the detailed inspection of situations where the motion could hide the details. The function is also available with the optional foot pedal.

Scene File
4 scene files are provided to keep pre-set memories for functions and controls. It is easily possible to call suitable programs to adapt the conditions for taking photographs by this function.

Flip and Turn Function
Digital capture means that captured images can be flipped horizontally and vertically by the digital processing to correct TV images against the optical inversion caused by optical instruments. An optional foot pedal is required to allow an external operation for this function.

Electronic Zoom Function
The center of video image on the screen can be zoomed up to four times by using this function.

■**Rating**

Scanning System	1920x1080, 50/59.94 frames, Progressive
Image Pickup Device	1/3-inch CMOS with 2.2 megapixels (1920x1080)
Effective Pixels	1920(H)x1080(V)
	RGB Color Filter
Lens Mount	C-Mount
Output Signal	HDTV : HD-SDI BNC 2ch
	DVI : 1920x1080p or i(convertible type) 1ch
	(Adding one channel is possible as an option)
	Down Converter Output :
	SDTV : NTSC/PAL composite BNC 1ch
	Y/C : S terminal 1ch
External Synchronization	HDTV Tri-level SYNC (0.6Vp-p)/75ohm 1ch
Operating Temperature	0°C to +40°C
Power Requirement	DC12V±10%
Power Consumption	Approx. 16W or less
Weight	Camera Head: approx. 60g
	CCU: 1.1kg or less
Dimensions	Camera Head: W31xH31xD36mm
	(Projected parts are not included)
	CCU: W170xH58xD200mm (Projected parts are not included)
Camera Cable	5m or 10m single (Selectable depending on the composition)

■**Performance**

Sensitivity	F7 at 2000 lux/3200°K (standard)
S/N Ratio	50dB (standard, Gamma/Detail off)
Resolution	900TV Lines (Y)

■**Function**

| Auto White Balance	Available on the front panel of CCU
Auto IRIS	DC IRIS (Bayonet Mount Lens IRIS) Control Type
Auto Shutter	1/60 – 1/4000 (Rolling Shutter)
Auto Gain Control	0 – 18db
Photometry Area	4 Types + User Set-up
Scene File	4 Position
	(Calling the positions by the switch on the front panel of CCU)
Picture Freeze	CCU front panel or Foot Pedal (option)

■**Standard Accessories**

AC Adapter, Operation Manual

■**Optional Accessories**

DVI Board, Foot Pedal with Two Switches

[External Appearance: mm]
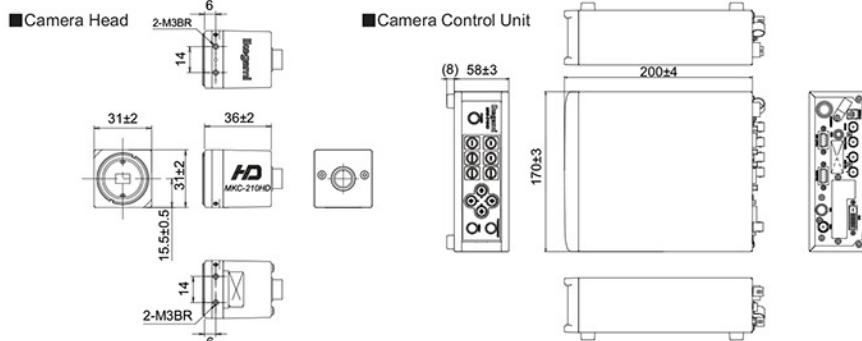
■Camera Head

■Camera Control Unit

Front Panel

Rear Panel

Ikegami

MKC-230HD

3CMOS Full-HD
1080p Native Progressive

HD *High Definition*

1920 X 1080

Medical Grade

High Performance Compact HD Camera for the High-Tech Medical Practice

- Full High Definition (HD) compact camera modular system

- High Sensitivity image capture allows to work in low light

- Three CMOS progressive image sensors and processing

- C mount for a variety of lenses and microscopic uses

- Advanced technology digital output (3G HD-SDI 1080p)

- Very light (<100g) and compact camera head (34×40×40mm)

MKC-230HD
3CMOS Full-HD
1080p Native Progressive

1920 X 1080
Medical Grade

Compact Camera Head
W34 x H40 x D40mm and 100g or less.

High Resolution / High Sensitivity
Full HDTV 1/3-inch 3CMOS Sensors Provides 1000 TV lines of high definition video images, coupled with High Sensitivity performance of F10/2000lux (F14 High sensitivity ON) providing the optimal video quality required for high-end medical video systems.

Digital Processing
Video signal processing is done in high-performance digital process of newly developed.

A Variety of video output
The camera equips with several video signal outputs such as digital HD signal (HD-SDI 1920 × 1080i/p), DVI digital signal (1920 × 1080i/p) and NTSC/PAL signal (VBS, S-VIDEO).

Automatic Electronic Shutter System (Shutter Iris)
Electronic shutter (Shutter Iris) functionality maintains the optimized performance in variety of situations.

Automatic Iris Control
Accurate iris control is possible with Auto-iris camera adaptors and Auto-iris lenses.

Picture Freeze
Pressing the Freeze button on the CCU panel will hold the current image. This allows the detailed checking of situations where the motion could hide the details.

Scene File
4 scene files are provided to keep pre-set memories for functions and controls. When the camera setting is changed, it can be easily set back to the original settings.
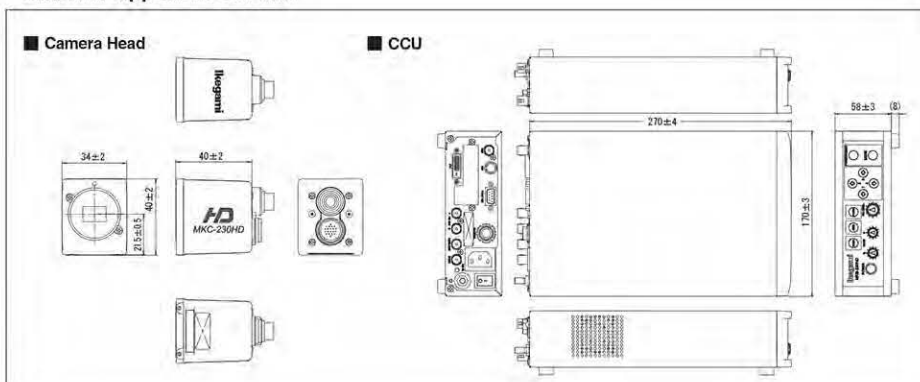
Flip and Turn Function
The captured images can be flipped horizontally and vertically by the digital processing to correct TV images against the optical inversion caused by optical instruments.

Digital zoom Function
The center of video image of the screen can be zoomed up to four times by using this function.

■ Rating

Scanning system	1920x1080 50/59.94 Progressive
Image Pickup Device	1/3-inch 3CMOS
Effective Pixels	1920(H) X 1080(V)
Lens Mount	C-Mount
Operating Temperature	0°C to +40°C
Power Requirement	AC100V to AC230V ±10%
Power Consumption	80VA or less
Dimensions/Weight	Camera Head:W34 x H40 x D40mm / 100g or less
	CCU:W170 x H58 x D200mm / 2kg or less
Camera Cable	5m single, 7m single or 5+10m combination cable

■ Performance

Sensitivity	F10 at 2000 lux/3200°K or better (F14 High sensitivity ON)			
S/N Ratio	54dB (Gamma/Detail off, Y signal)			
Resolutions	Horizontal: 1000 TV lines			
Output signal	HDTV	HD-SDI 1920×1080 i/p	BNC	2ch
		DVI 1920×1080 i/p		1ch
	SDTV	Composite (VBS)	BNC	1ch
		S-Video	S terminal 1ch	
Sync Signal	HDTV: Tri-sync signal 1ch			

■ Function

Auto White Balance	Available on the CCU front panel
Auto Iris	DC IRIS control
Auto electrical shutter	1/50 or 1/60 sec to 1/10000 sec
Auto gain control	0～18 d B
Measurement area	4 area + user setting
Scene file	4 files
Freeze	Available on the CCU front panel or an optional Switch

■ Standard accessories

AC Power Cable, Operation manual

■ Optional Accessories

Camera cable (5m single, 7m single or 5+10m combination cable), Microscope Adaptor, Dual Foot Switch.

External Appearance : mm

■ Camera Head   ■ CCU

Front Panel

Rear

Ikegami

HD **4K**
High Definition

Medical Grade 3CMOS Full HD Camera
High Sensitivity Model & 4K Output

MKC-704KHD

Full HD / 4K Resolution & High Sensitivity

ABOUT 4K

4K (3840x2160) delivers four times as much detail as Full HD (1920x1080), providing high quality images as real as seen by the human eye. Especially on a big screen, it reproduces images superior to Full HD.

Full HD / 4K Output with High Sensitivity

When providing full HD (1920 x 1080) & 4K (3840 x 2160) signal output, the MKC-704KHD has a sensitivity of F17 at 2000 lx(LINE MIX On).
*Note: The trade off is some loss in resolution when using line mix.

Compact and Lightweight Camera Head

The compact and lightweight camera head is ideal for use in applications with limited space such as on a surgical microscope.

40mm
34mm
40mm

Antibacterial Coating

The camera head and CCU (camera control unit) are coated to improve infection control.

Various Image Outputs

The CCU(camera control unit) outputs digital HD signals (HD-SDI and DVI), as well as, a 4K signal. By the internal down converter, composite signals(VBS, Y/C(S-VIDEO)) can be also output.

Remote Control

By connecting an optional foot switch to the remote control terminal, external control is available for various functions including flip and turn function and scene file function.

Flip and Turn Function

The captured images can be flipped horizontally and vertically by the digital processing to correct TV images against the optical inversion caused by optical instruments. Remote control is available via an external optional unit such as a foot switch.

Image Correction Function

Image detail, resolution and modulation depth are significantly improved by special image-correction.

Dynamic Contrast Correction (DCC)

The gradation-corrector achieves a higher contrast image without halation or black defects. It also improves contrast in the detail area.

Scene File

4 scene files are provided to keep pre-set memories of various control functions for convenient use. Scene file data can be saved into and loaded from a USB memory.

Function Switch

Four switches are available on the CCU to custom assign to control functions important to the user.

| F1 | F2 | F3 | F4 |

Specifications

Rating

Optics	RGB prism		
Image Pickup Device	1/3-inch, CMOS x 3		
Lens Mount	C-Mount		
Output Signals	4K	3G-SDI (Level A) × 4 BNC 1ch	
		3840 × 2160p	
	HDTV	HD-SDI 2ch	
		1920 × 1080i/p	
		DVI 1ch	
		1920 × 1080i/p	
	SDTV	composite(VBS) 1ch	
		Y/C(S-VIDEO) 1ch	
External Reference	HDTV Tri-Sync 1ch		
Remote Input	parallel 4 points 1ch D-Sub 9pin		
	Available to assign 4 motions from scene file switching/ image flip and turn/fluorescent video shooting/ ICG mode/electronic zoom(IN/OUT)/brightness correction		
Camera Cable (option)	Multi-core cable 5m, 7m, 5m + 10m		
Dimensions / Weight	Camera Head	W34 × H40× D40mm[W1.33 × H1.57× D1.57 inch] (excluding protrusions) / 100g (0.22lb) or less	
	Camera Control Unit	W210 × H80× D270mm[W8.26 × H3.14 × D10.62 inch] (excluding protrusions) / 3kg(6.61lb) or less	
Power Requrement	AC 100V to 230V ±10% 50/60 Hz		
Power Consumption	50VA		
Safety Approval	EN60601-1, ANSI/AAMI ES60601-1		

Function

Electronic Shutter (Rolling Shutter)	Manual	1/100 to 1/10000
	Auto	1/100 to 1/10000
	Slow	1/4, 1/8, 1/15, 1/30 field/sec
Gain	-9dB to 24dB (3dB steps)	
Automatic Functions	Auto White Ballance Auto Gain Control Auto Iris Cointrol Auto Knee	
Image Correction Functions	Shading Correction, DTL Correction, Flare Correction, Contrast Correction	
Auto Iris Sample Area	Narrow / Middle / Full / Circle / USER	
Image Flip and Turn	Horizontal, Vertical	
Scene File	4 files (by CCU front switch) Setting data can be stored in USB memory	
H/V Centering	Built-in	
Digital Zoom	1.1x -4x	
ICG Mode	Available by function key or optional foot switch	
Fluorescent Mode	Available by function key or optional foot switch	
Color Bar	Built-in	
Color Correction (paint)	R-channnel / B-channel Correction available via CCU front control	
Brightness Adjustment	Available via CCU front control	
Freeze Function	Built-in (Controlled by CCU front switch or optional foot switch), still image / live image can be exchanged	
Image Level Indicator	7 steps (by LED display on CCU)	

Performance

Resolution	1000 TV Line
S/N Ratio	58dB (Gamma/Detail OFF)
Sensitivity	2000 lx F17 /3200K (LINE MIX ON)

Panel

INSPIRE INFOTECH PRIVATE LIMITED
MEDICAL DIVISION

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Tel: +91 26284578-79 | 9811078156
medical@inspireinfo.com | www.inspireinfo.com

inspire
MEDICAL
THE OR PEOPLE

Ikegami
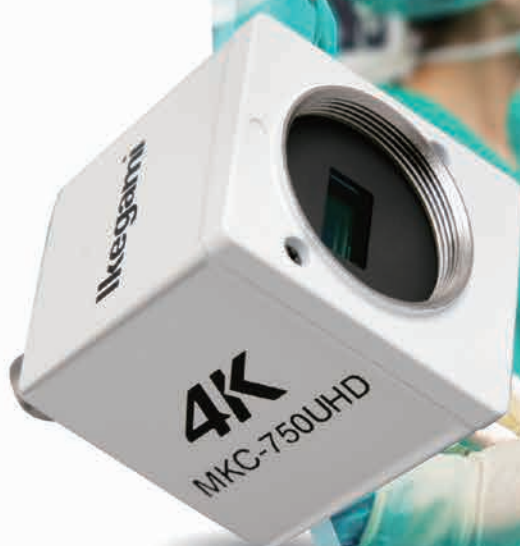
4K

High Resolution 4K Camera
MKC-750UHD

Superior Picture Quality

4K
RESOLUTION

COMPACT
AND LIGHTWEIGHT

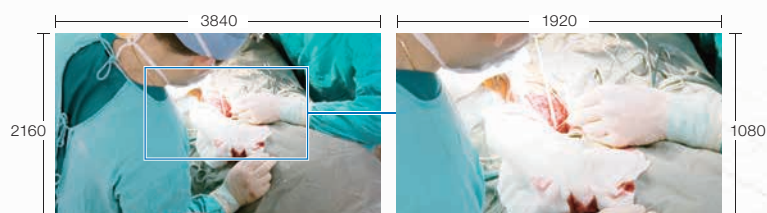High Resolution 4K Camera

MKC-750UHD

4K

4K RESOLUTION

4K High Resolution

By equipping the CCU with 4K (3840x2160) digital processing, the MKC-750UHD produces superb resolution with four times the sample rate of conventional HD (1920x1080).
(Horizontal Resolution 1600TVL, and S/N 58dB)

Quarter (1/4) video capture for full HD (1920x1080) display

3840   1920

2160   1080

ABOUT **4K**

4K (3840x2160) delivers four times as much detail as Full HD (1920x1080), providing high quality images as real as seen by the human eye. Especially on a big screen, it reproduces images superior to Full HD.

3840

1920

4K

720   2160

Full HD

1080

SD   480

(Unit:pixel)

40mm

34mm   40mm

(Full Size)
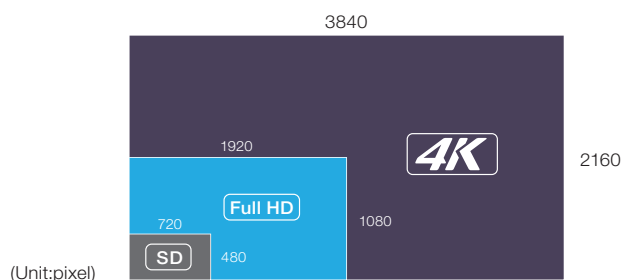
COMPACT AND LIGHTWEIGHT

Compact and Lightweight Camera Hea

Although the MKC-750UHD is a 4K camera, it has a very compact and lightweight camera head.

FEATURES & FUNCTIONS

High Sensitivity

When providing 4K resolution, the MKC-750UHD has a sensitivity of F11 (LINE MIX ON) at 2000 lx.

Various Image Outputs

The CCU outputs digital HD signals (HD-SDI and DVI), as well as, a 4K signal.

Automatic Iris Control

By connecting an exclusive camera adaptor, the auto iris control function can be used. Optical Iris in this connection.

Automatic Electronic Shutter System (Shutter speed)

The continuously variable electronic shutter can be used with a manual iris lens. This Iris functionality maintains optimized performance over a wide range of lighting conditions.

Auto Gain Control

The gain can be adjusted automatically to provide the proper picture brightness when the light level is not enough.

Flip and Turn Function

The images can be flipped horizontally and vertically by the digital processing to correct the TV image against the inversion caused by optical instruments. Remote control is available via an optional external unit such as a foot switch.

The original image

Reverse image

Antibacterial Coating

The camera head and CCU (camera control unit) are coated to improve infection control.

Picture Freeze

By pressing the Freeze button on the CCU, it is possible to hold the current image.

Scene File

4 scene files are provided to keep pre-set memories of various control functions for convenient use. Scene file data can be saved into and loaded from a USB memory.

Function Switch

Four switches are available on the CCU to custom assign to control functions important to the user.
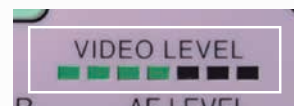
F1   F2   F3   F4
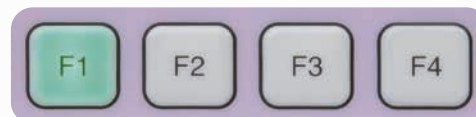
Digital Zoom

Electronic zoom for the center of an image is available, up to four times.

Level Indicator

Video level can be checked and adjusted using a level indicator on the CCU.

VIDEO LEVEL

ACCESSORIES

Surgery Microscope Adaptor

CFA-400R

Focus/Remote control

CFA-400

Other Accessories

Camera cable

Single : MCCGHPP-050 (5m)
Single : MCCGHPP-070 (7m)
Combination : MCCGHPP-050 (5m) +
              MCCGCJP-100 (for extension 10m)

Dual Foot Switch
OFLTV-SP

Specifications

Rating

Optics	RGB prism	
Image Pickup Device	1/3-inch, CMOS x 3	
Lens Mount	C-Mount	
Output Signals	4K	3G-SDI (Level A) × 4 BNC 1ch
		3840 × 2160p
	HDTV	HD-SDI 2ch
		1920 × 1080i/p
		DVI 1ch
		1920 × 1080i/p
External Reference	HDTV Tri-Sync 1ch	
Camera cable (option)	Single : MCCGHPP-050 (5m)	
	Single : MCCGHPP-070 (7m)	
	Combination : MCCGHPP-050 (5m) + MCCGCJP-100 (for extension 10m)	
Dimensions / Weight	Camera Head	W34 × H40 × D40mm (excluding protrusions) / 100g approx.
	Camera Control Unit	W210 × H80 × D270mm (excluding protrusions) / 3kg or less
Power Requrerment	AC 100V - 230V ±10% 50/60 Hz	
Power Consumption	29W	
Safety Approval	EN60601-1, ANSI/AAMI ES60601-1	

Performance

Resolution	1600 TV Line
S/N	58dB (Gamma/Detail OFF)
Sensitivity	2000 lx F11 /3200K or more (LINE MIX ON)

Function

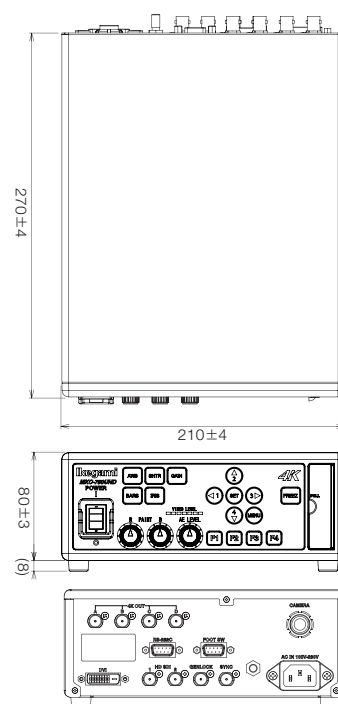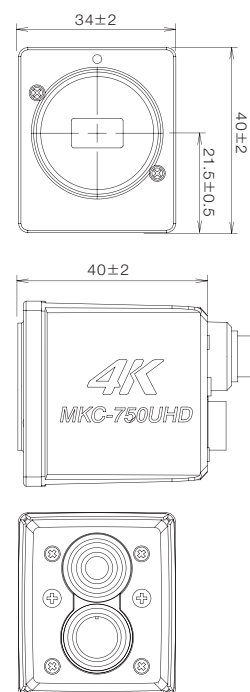|		
Electronic Shutter (Rolling Shutter)	Manual	1/100～1/10000
	Auto	1/100~1/10000
	Slow	1/4, 1/8, 1/15, 1/30 field/sec
Gain	-9dB~24dB (3dB steps)	
Automatic Functions	Auto White Ballance Auto Gain Control Auto Iris Cointrol Auto knee	
Image Correction Functions	Shading Correction, DTL Correction, Flare Correction, Auto knee	
Auto Iris Sample Area	Narrow / Middle / Full / Circle / USER	
Image Flip and Turn	Horizontal, Vertical	
Scene File	4 files (by CCU front switch) Setting data can be stored in USB memory	
H/V Centering	Built-in	
Digital Zoom	1.1x -4x	
Color Bar	Built-in	
Color Correction (paint)	R-channnel / B-channel Correction available via CCU front switch	
Brightness Adjustment	Available via CCU front switch	
Freeze Function	Built-in (Controlled by CCU front switch or optional foot switch), still image / live image can be exchanged	
Image Level Indicator	7 steps (by LED display on CCU)	

Front & Rear Panel

Front Panel

Rear Panel

Dimensions (Unit:mm)

CCU

Camera Head

Ikegami

4K

MKC-

Native 4K Medical Grade Camera

X800

MKC-X800 is the beginning of Ikegami´s new camera generation for 4K resolution. MKC-X800 is a 4K-native progressive-scan 1-CMOS model with an ultra-compact head designed to be operated from a remote CCU. Features include ultra-high resolution, sophisticated GUI and single cable 4K output.
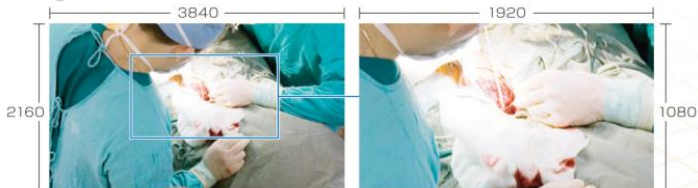
Value for the New Generation

Excellent Image Quality with 4K Native Sensor

The 4K native 4K sensor provides excellent video image quality. It produces superb resolution (1800TVL horizontal resolution) and low picture noise (58dB S/N).
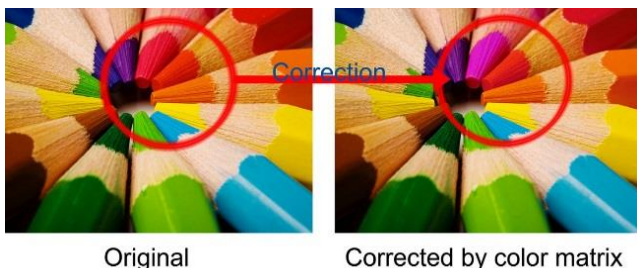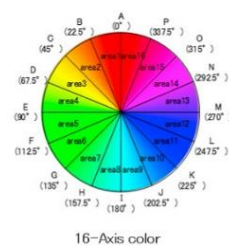
HD cut-out

Magnified but still FHD quality.
The HD cut-out function provides magnified FHD images from original 4K images without any degradation.

Various Image Outputs

MKC-X800 provides various 4K outputs as 12G-SDI (or 3G-SDI x4) or HDMI2.0.
4K and HD(1080p/1080i) images can be output simultaneously. It also matches the existing HD system.

*MKC-X800 Rear Panel

16-Axis Color Correction

The color correction function enables precise color adjustment. 16 axes of the color gamut can be fine tuned in both hue and saturation.

16-Axis color

Original   Corrected by color matrix

3D Master-Slave Control for Heads-up Surgery

By setting up two cameras as master and slave, the slave camera will automatically follow the control of master camera. This function is ideal for use in a heads-up surgery system.

Multi-Language Support

As a state-of-the-art global medical device, the camera's GUI and OSD menu both support English, German, French and Spanish multi-language.

Name-Editable Scene File

4 scene files are provided to store pre-set memories of various control functions for convenient use. The name of each scene file is editable by touch panel operation.
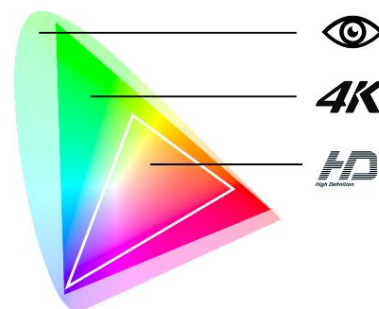
Extra-Value in 4K image

· Ultra high resolution

- Suitable for heads-up surgery   with large size monitor.
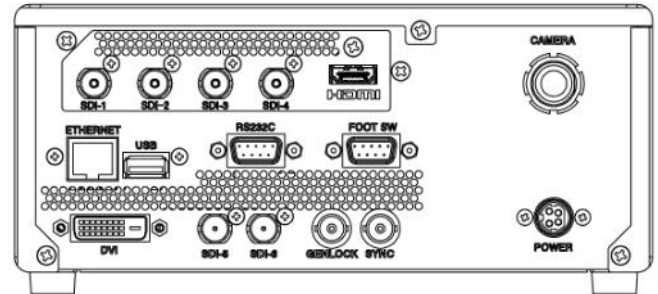   (Realistic performance with 4K resolution)
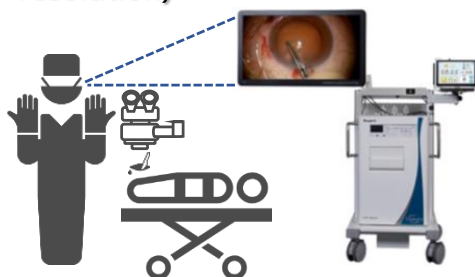
· Wide color gamut

- Higher color reproductivity displaying, for example, very fine detail such as small veins to help specify the blood point.

Touch Panel and Sophisticated GUI

Ikegami has developed a sophisticated and user-friendly new GUI design for the CCU (Camera Control Unit) touch panel. The GUI provides easier understanding and easier operation.
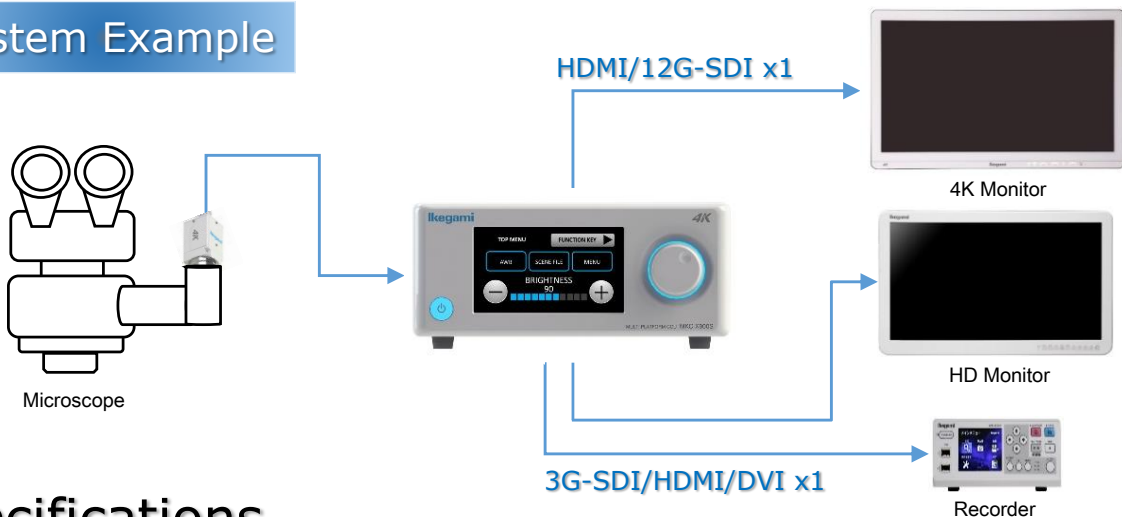
Compact and Lightweight Camera Head

The MKC-X800 has a very compact and lightweight 4K native camera head.

Antibacterial Coating

The camera head and CCU are coated to improve infection control.

System Example

HDMI/12G-SDI x1

4K Monitor

Microscope

HD Monitor

3G-SDI/HDMI/DVI x1

Recorder

Specifications

Image Pickup Device	1/2.52 inch 4K native sensor	Power Consumption		33W or less
Lens Mount	C-mount	Weight	Head	100g or less
Effective Pixels	3840 x 2160		CCU	3.0kg or less
Sensitivity	F5.6	Dimensions	Head	27.5 x 28.0 x 50.0mm
S/N Ratio	58dB		CCU	210 x 88 x 274mm
Resolution	1800TVL	Functions		Auto Functions (Gain, White balance, Shutter, Knee), Slow Shutter, High Sensitivity Mode(Pixel mix, Line mix, Pixel/Line mix) Detail Enhancement, 16-Axis Color Correction, Digital zoom (Max. x4), Flip & Mirror, e.t.c.
Output Signal	4K: HDMI2.0 , 12G-SDI or 3G-SDI x4 HD: 3G-SDI, DVI, HDMI			
Input Signal	RS-232C, Foot Switch			
Camera Cable	5m, 5+10m			

Newly Designed OEM Module

Ikegami provides a newly designed CCU to drive a 4K native 1-CMOS head. Also available are several different 4K and HD heads such as the 3-CMOS 4K and a unique 4-CMOS 2K camera head for ICG applications.

Compact Size

Very compact new processing board plus compact and lightweight camera head, saving space in integrated solutions.

Technical Support

Based on the cutting edge image technologies, Ikegami has started to work for medical device in 1973. We will provide expert technical support for OEM partners based on our abundant experience.

Selectable Output Board

The camera control unit (CCU) can deliver output formats such as Quad 3G, 12G-SDI and HDMI 2.0 by selecting optional video output I/F boards, enabling various system applications with peripheral devices.

Saving design Resources

The unique board drives several different camera heads (4K native 1-CMOS, 4K 3-chip, and 2K 4-chip RGB+IR), making each control unit suitable for multiple applications.

Other Features / Functions

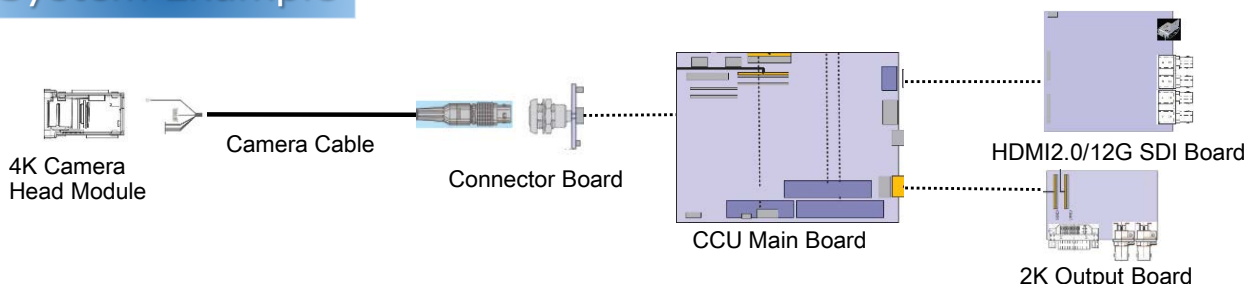|			
Customizable camera cable	External sync function	High Sensitivity Mode	Flip & mirror
External command control	Easy update with USB (Option)	3D support	Multi-language support

Why 4K in Endoscopy?

The ultra high resolution of 4K images enables doctors to move the camera away from the affected part, delivering two major benefits.

1. The viewing angle of the operation is enlarged which increases the probability of seeing the affected area.
2. Keeps the tip of lens clean, simplifying the process of lens cleaning and saving surgery time.

System Example

4K Camera Head Module

Camera Cable

Connector Board

CCU Main Board

HDMI2.0/12G SDI Board

2K Output Board

Design and specifications are subject to change without notice.

ISO 9001   ISO 14001
Certified JQA-0755   Certified JQA-EM3888

Ikegami

Surgery Microscope High Resolution Adaptors
for 3 chips Full HD / 4K Cameras

CFA-400 series

CFA-400 CFA-400R CFA-400RIR

Ikegami has developed new surgery microscope adaptors, CFA-400 series, for 3 chips Full HD (High Definition) and 4K cameras with the higher optical resolution. They equip the optical auto iris function and perform the deeper focus depth with Ikegami MKC camera series.

High Resolution

Higher resolution of the optical lens even for 4K cameras. Approximately 1.5 times better than conventional model.

CFA-400 with sharper images

Conventional camera adaptors

Bright Optics

The new optical design is developed for the brighter optics. Approximately 1.3 times better than conventional model.

Optical Auto Iris

The optical iris can be adjusted automatically and it can contribute to perform deeper focal length.
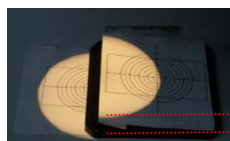
Remote Focus Control

(CFA-400R/-400RIR)

The remote controller can easily control the focus adjustment even during the surgery.
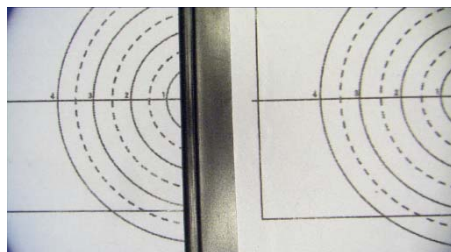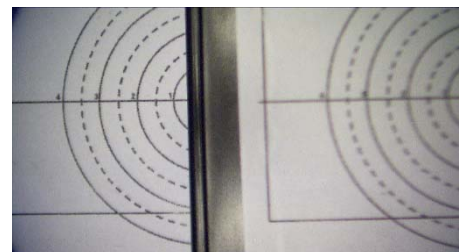
One Push Automatic Filter Changer

(CFA-400RIR)

One pushing button on the remote controller can automatically switch the integrated filter to move to ICG mode with Ikegami MKC cameras.
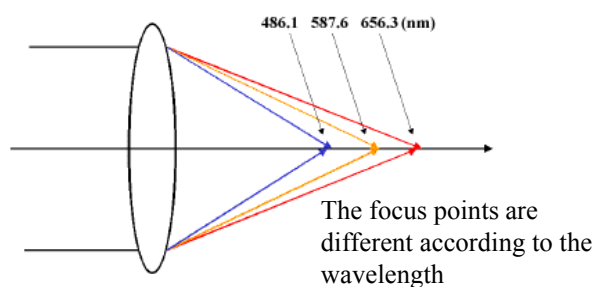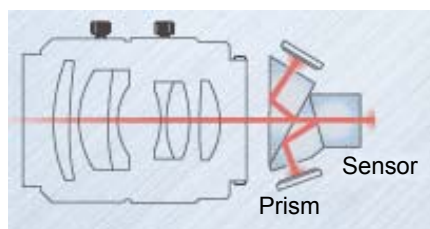
CFA-400 series

Deeper Focal Depth

Approximately 20mm height

Combination with Ikegami MKC-230HD Rev A and CFA-400

Conventional camera and adaptor

Dedicated Design for 3 Chips Cameras

486.1   587.6   656.3 (nm)

The focus points are different according to the wavelength

Chromatic aberration

Sensor

Prism

Dedicatedly designed for less chromatic aberration

Field of View

Surgery microscope Field of View

53mm   59mm
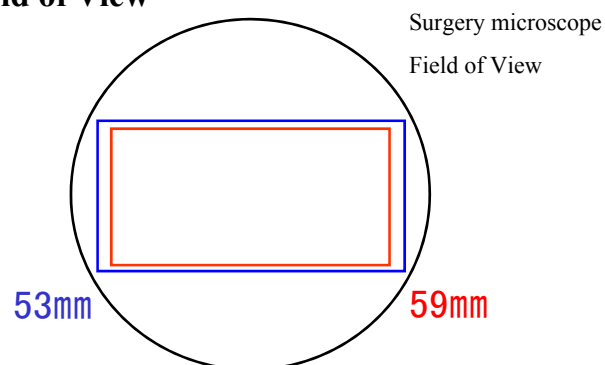
* **Eye Piece x10, 1/3" Full HD camera**

Specification

Model	CFA-400RIR	CFA-400R	CFA-400	CMA-100HD
Camera sensor	1/3" recommended			
Lens mount	C-mount			
Focal length	Fixed			
	53mm	53mm or 59mm (Selectable)	53mm	55mm
Iris power	DC12V±10%, 120mA or less			N/A
Focus	Remote focus		Manual focus	
X-Y axis adjustment	Available			
Filter change	One push automatic	N/A	N/A	N/A
Size (mm)	113.5 x 79 x45	113.5 x 79 x45	113.5 x 79 x45	57.5 x 36 x55.5
Weight	450g or less	450g or less	450g or less	185g or less

Economy Model
CMA-100HD

It equips the manual iris and focus control with the fixed focal length but still keeps the optical resolution for Full HD format.

Ikegami

MLW-2150HD

High Definition LCD Medical Monitor

HD High Definition

The MLW-2150HD Medical Monitor is designed by Broadcast Industry Specialists to meet the stringent demands of today's Healthcare Professional.

Cost effective LCD HD Medical Grade Monitor delivers real time Broadcast Grade images - pristine images for medical applications where High Definition resolution is ideal.

The MLW-2150HD provides Broadcast Quality Images at a price that the Medical Market can afford.

Features

- Affordable 21.5-inch full HD LCD Monitor
- Medical Grade (Medical UL Approved)
- HD Panel with 3G HD-SDI interface
- LED Back Light
- Easy to use ergonomics and user friendly preset functions
- Light weight and rugged enough to withstand harsh environments
- Non-hazardous, toxic free, lead free components
- ECO friendly LED solution to meet with the latest safety regulations
- 3G HD-SDI, HDMI, DVI-D, PC and Composite inputs
    - Brightness: 250cd/m^2
    - Contrast Ratio: 1000:1
    - 8 bit color (16.7M colors)
    - VESA interface

MLW-2150HD

High Definition LCD
Medical Monitor

HD
High Definition

SPECIFICATIONS

MLW-2150HD	Description
LCD-Type	21.5″ Diagonal AM-TFT(Active-Matrix)
	Pixel pitch(mm): 0.24825(H) x 0.24825(V)
	Brightness: 250cd/m² (Typical)
	Contrast ratio: 1000:1 (Typical)
	Viewing angle: 170°/160°(H/V)
	Response time: 5ms (Typ., on/off)
Resolution (H X V)	1920X1080@60Hz
Frequency	Horizontal: 31~80kHz,
	Vertical: 56~75Hz
Input Signal	VIDEO (1ch input 1.0Vp-p, 75Ω terminated, 1ch loop-through out)
	HDMI (High Definition Multimedia Interface)
	DVI (Digital Video Interface)
	VGA (RGB-PC)
	3G/HD/SD-SDI (BNC, 75ohm, 1ch input / 1ch loop-through out)
Active Screen Size	476.64mm x 268.11mm
Packing Dimensions (W x H x D)	580mm x 440mm x 145mm (22.83″ x 17.32″ x 5.71″)
Weight	Net: 5.51Kg (12.15 lbs)
	Gross: 7.13Kg (15.72 lbs)
Electrical Ratings	12V 1.8A (100-240V~, 50/60Hz)
Power Consumption	ON: <21.6W OFF: <1W

SDI Format Support Table

| SDI		Supported Format
Input / Loop Through	3G	1080p (60/59.94/50)
	HD	1080i (60/59.94/50)
		1080p (30/29.97/25/24/23.98)
		720p (60/59.94/50)
	SD	480i (59.94)
		576i (50)

Wide Viewing Angle

Our LCD panel technology employs wide high contrast viewing at all angles - UP/DOWN/LEFT/RIGHT.

This characteristic prevents a change in brightness or color shift from the viewing angle.

160°

170°

Convenient Display Positioning

Our LCD panel allows the user to adjust the position of the panel for maximum comfort. Tilt Range: -3°~75°
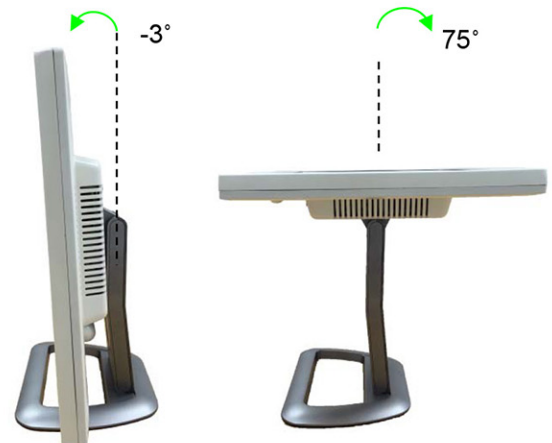
-3°

75°

Ikegami

Precision Imagery for Critical Applications

[26-inch Medical Grade LCD Color Monitor]

MLW-2624C-DC

The MLW-2624C-DC is a wide screen 26-inch LCD monitor providing a high-definition image, with the color reproduction and functionality required in the medical field. It is designed with a flat front panel, with no vents and fans.

Pursuing the exceptional quality for medical applications

10-bit IPS Panel with LED Backlight

This monitor is fitted with a high brightness IPS panel with wide viewing angle of 178 degrees up/down and left/right. The energy saving LED backlit panel reduces power consumption. 12-bit signal processing and 10-bit LCD panel support smooth gradation.

Wide Color Gamut

It provides a wide color gamut in red, and true color reproduction required in medical field.

Variety of friendly features

Two Screen Display

SDI and another input signal can be displayed simultaneously with side-by-side or picture-in-picture display modes.

Signal combinations
- SDI & DVI-D
- SDI & S-VIDEO
- SDI & Component
- SDI & RGB
- SDI & VIDEO

■ side-by-side   ■ picture-in-picture

Function Key

For convenient use, a frequently used function can be assigned to the Function key to select instantly.

Flip Function

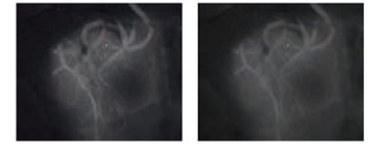Images can be flipped horizontally and vertically.

Touch Switch

A touch switch is fitted for easy operation.

POWER INPUT1 INPUT2 PIP MENU PRESET F1 F2 F3 F4 ENTER

Dynamic Image Contrast Enhancer

By calculating the brightness of the entire screen and extending the dynamic range between white and black in real time, automatically optimized black level and high contrast are achieved.

■ Function ON   ■ Function OFF

Still Image

It is possible to check with a still image against the current video. The input video and memorized still image can be compared on the screen.

Hyper Image Enhancer

By controlling the chromaticity, luminance, and edge enhancement of a specific color space, the MLW-2624C-DC is able to improve the reproduction of difficult areas within a picture.

■ Function ON   ■ Function OFF

No Vent Structure

This monitor is cooled by air convection without vents and fans which allows easy cleaning.

* The picture is a composite image.

■ **Specifications**

LCD Panel Size	26-inch
Backlight System	LED
Display Size	576(H) × 324(V)mm
View Angle	178° (up&down / left&right)
Maximum Brightness	450cd/m² (Typical)
Contrast Ratio	1400:1 (Typical)
Pixels	1920(H) × 1080(V)
Color Gradient	1,073,740,000
Color Reproduction Range	BT.709
VIDEO Input	
Signal and Connector	composite (VBS) 1CH:BNC (with loop through)
	Y/C (S-VIDEO) 1CH:S terminal (with loop through)
RGB/Component Input	
Signal and Connector	R,G,B or Y,Pb,Pr 1CH:HD-15 [D-Sub 15pin] (with loop through)
DVI Input	
Signal and Connector	DVI-D (equipped with cable compensation equipment:Max.30m) 1CH:DVI-D 24pin Max. clock 162MHz
SDI Input	
Signal and Connector	3G-SDI (Level A)/HD-SDI/SD-SDI 1CH:BNC (with loop through)
DC5V Output	1A output
Safety Approval	ANSI/AAMI ES60601-1, CSA C22.2 No. 60601-1, EN60601-1, GB4943.1-2011
EMC	FCC Class A, VCCI Class A EN60601-1-2, GB9254-2008 (Class A) GB17625.1-2012
Power Requirement	Monitor : DC 24V ±1V AC adapter : 100-120V/200-240V
Power Consumption	65W or less
Ambient Temperature	+5°C to +35°C
Dimensions	W640 × H405 × D84mm (excluding protrusions)
Weight	approx. 8kg (excluding stand)

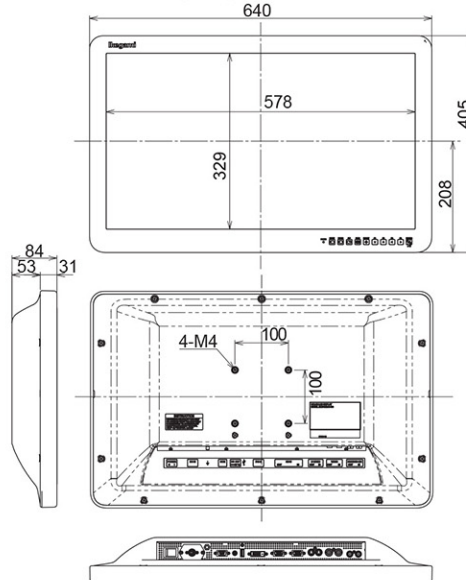■ **Available Display Signal for DVI-D/HD15 (D-Sub15p)**

DVI-D	VGA, SVGA, XGA, SXGA, WUXGA 480i/60, 575i/50, 1080i/60, 1080i/50, 720P/60, 720P/50, 1080P/60, 1080P/50
HD15 (D-Sub15p)	VGA, SVGA, XGA, SXGA, WUXGA 480i/60*, 575i/50*, 1080i/60*, 1080i/50*, 720P/60, 720P/50, 1080P/60, 1080P/50

* Available for only G-Sync

■ **Connector**

POWER DC IN COM DC OUT +5V 1A USB DVI-D OUT HD15 IN S-VIDEO OUT IN VIDEO OUT IN 3G/HD/SD/SDI OUT IN

■ **Dimensions (mm)**

640
578
329
405
208
84
53
31
4-M4
100
100

TS-300 (option)
485(W)
220(D)
100
75
100
75
Max 375 Min.245

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inspire MEDICAL
THE OR PEOPLE

Ikegami

4K

27-inch Medical Grade 4K UHD Color Monitor

MLW-2750UHD

Perfectly customer-oriented design

The superior detailed picture quality of the Ikegami surgical monitor meets operating room requirements. With its 27-inch IPS 8 megapixel display, the Ikegami surgical monitor improves work efficiency both by enabling detailed observation and for multiple imaging applications.

Photo: MLW-2750UHD
with MKC-750UHD 4K camera

PRESET FUNCTION WITH IKEGAMI MEDICAL GRADE CAMERAS

The Ikegami MLW-2750UHD has a user preset function allowing easy adjustment and storage of the display mode and image setup parameters. It is ideal for use with the MKC-750UHD 4K camera and for Ikegami MKC Full HD cameras.

## 4K HDMI 2.0, DISPLAYPORT 1.2 AND VARIOUS INTERFACE OPTIONS

The MLW-2750UHD is fully compatible with HDMI 2.0 and DisplayPort (Ver.1.2) for UHD resolution (3840 x 2160) at 50/60Hz refresh rate. HD resolution 3G-SDI and DVI-D are also supported.

OUTSTANDING PICTURE QUALITY

The MLW-2750UHD is fitted with an 800cd/m2 high brightness IPS panel. The IPS display also provides accurate reproduction to achieve smooth image graduation well into the deep red section of the colour spectrum.

PICTURE ENHANCEMENT FUNCTION

Ikegami MLW-2750UHD also has a Picture Enhancement Function delivering wide dynamic range reproduction of the video. This function ensures that high quality display extends both to dark and bright areas of the image.

OFF   ON
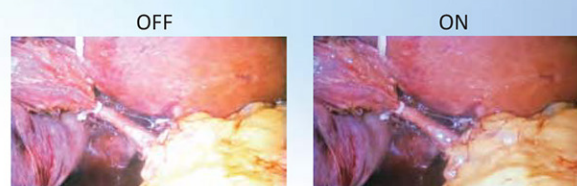
PICTURE OPTIMISATION FUNCTION

Auto brightness/contrast stabilisation functions are included to ensure the most accurate and consistent shading possible for medical imaging. Gamma options and DICOM PART 14 can also be selected when required.
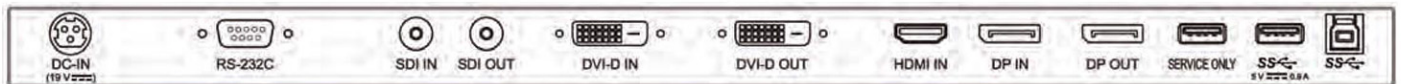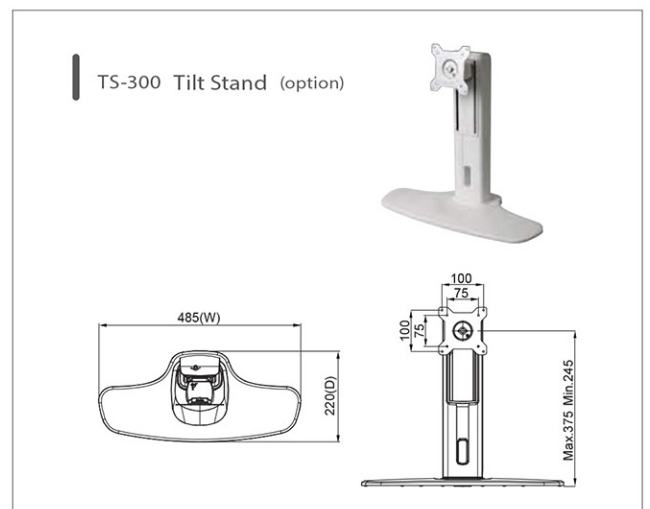
EASY TO USE

Weighing only 7.7kg (17lb), the MLW-2750UHD offers the portability required for use in applications such as medical transport carts. Its IP35 rated (front) and IP32 rated (back) panels, give protection against dust and water during operations and post-operation cleaning.

MLW-2750UHD

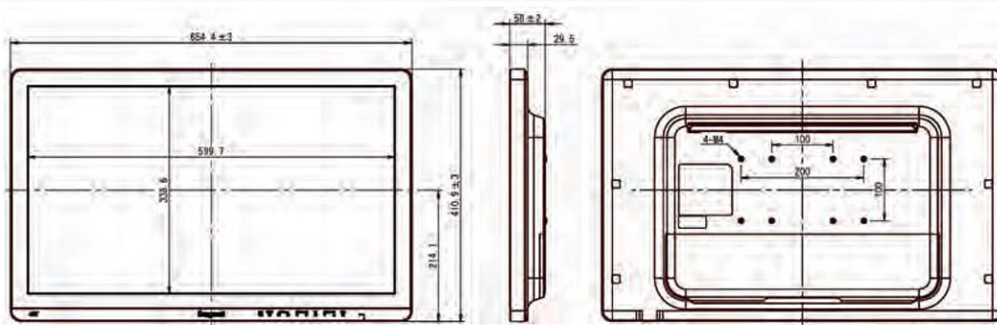| PANEL	
Size	27" class (27.0" diagonal)
Panel Type	IPS
Color Gamut (CIE1931)	sRGB 115%
Colour Depth (Number of Colors)	10bit color (1.07B)
Aspect Ratio	16:9
Resolution	3840 x 2160
Brightness (Typ.)	800 cd/m^2
Contrast Ratio (Original)	1000:1
Response Time_Typ. (on/off)	14ms (Typ)
Viewing Angle (CR≥10)	178 / 178 degrees
Surface Treatment	With Optical Bonding Glass (1.3T, Anti-Reflection, Anti-Finger)

SIGNAL		
4K	INPUT	DisplayPort (1.2) x1 HDMI (2.0) x1
	OUTPUT	DisplayPort (1.2) x1
HD/PC	INPUT	3G SDI x1 DVI-D x1
	OUTPUT	3G SDI x1 DVI-D x1
USB		For service only
Others		RS-232C
Cable Cover (Rear)		Available

POWER	
Input	100-240V, 50/60Hz
Power Consumption	120W

MULTIPLE SCREEN DISPLAY	
PIP	Available
PBP	Available

Regulation	
Safety	FDA, MDD, Medical UL, cUL, CE, KC
Water, Dust Proof	(Front) IP35, (Rear) IP32

Others	
Weight	7.7kg (17 lb)
Dimensions	654.4 x 410.9 x 58 (mm)
Motor Fan	Fanless
Standard Accessory	Instruction manual, Power cable (2pcs), AC/DC adaptor, DisplayPort cable, HDMI cable

TS-300 Tilt Stand (option)

485(W)

220(D)

100
75
100
75

Max.375 Min.245

Connector Panel

DC-IN (19 V⎓)   RS-232C   SDI IN   SDI OUT   DVI-D IN   DVI-D OUT   HDMI IN   DP IN   DP OUT   SERVICE ONLY   SS⟷   SS⟷

Dimensions (Unit:mm)

654.4 ±3
599.7
335.6
410.9 ±3
214.1
50 ±2
29.5
4-M4   100   200   100

Ikegami

TYPE 3D

Precision Imagery for Critical Applications

[3D 26-inch Medical Grade LCD Color Monitor]

MLW-2627C-DC Type3D

Supporting work in the digital surgery era.
The MLW-2627C-DC Type3D reproduces a realistic 3D image with a high brightness of
$400cd/m^2$ [2D : $850cd/m^2$] providing a high-definition image with the color reproduction
and functionality required in the medical field.

Pursuing the exceptional quality for medical applications

High Luminance 3D

Featuring $400cd/m^2$ brightness, High Luminance 3D imagery, for lively real-life picture quality.

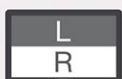### Applicable Diverse 3D Signals (HD-SDI x 2 and DVI-D x 2)

Applicable to diverse 3D signals such as side by side, line by line, top & bottom and SIMAL (simultaneous). Two of input signals not only HD-SDI but also DVI-D are available. It is also possible to use as 2D monitor.

L R		L R	L R
Side by Side	Line by Line	Top & Bottom	SIMAL (simultaneous)

Hyper Image Enhancer

By controlling the chromaticity, luminance, and edge enhancement of a specific color space, the The MLW-2627C-DC Type3D is able to improve the reproduction of difficult areas within a picture.

Dynamic Image Contrast Enhancer

By calculating the brightness of the entire screen and extending the dynamic range between white and black in real time, automatically optimized black level and high contrast are achieved.

Variety of friendly features

Multi-channel Function with Side-by-Side and Picture-in-Picture

The input signal can be displayed simultaneously with side-by-side or picture-in-picture display modes.

■ side-by-side   ■ picture-in-picture

■ Signal Combinations

	Video	S-Video	HD15 (D-sub15p)	DVI-1	DVI-2	SDI-1	SDI-2
Viadeo	–	–	○	○	○	○	○
S-Video	–	–	○	○	○	○	○
HD15 (D-sub15p)	○	○	–	○	○	○	○
DVI-1	○	○	○	–	○	○	○
DVI-2	○	○	○	○	–	○	○
SDI-1	○	○	○	○	○	–	○
SDI-2	○	○	○	○	○	○	–

User Preset Memory

It has a user preset function for easy setting and adjusting of the display mode and setup of image adjustment. Up to eight settings can be saved as a preset, and recalled when needed.

Function Key

For convenient use, a frequently used function can be assigned to the Function key to select instantly.

Flip Function

Images can be flipped horizontally and vertically.

Still Image

It is possible to check with a still image against the current video.
The input video and memorized still image can be compared on the screen.

Touch Switch

A touch switch is fitted for easy operation.

* The picture is a composite image.

■ Specifications

LCD Panel Size	26-inch
Backlight System	LED
Display Size	576(H) × 324(V)mm
View Angle	178°(up&down / left&right)
Maximum Brightness	3D : 400cd/m² (Typical) 2D : 850cd/m² (Typical)
Contrast Ratio	1400:1 (Typical)
Pixels	1920(H) × 1080(V)va
Color Gradient	1,073,740,000
VIDEO Input	
Signal and Connector	composite (VBS) 1CH:BNC (with loop through) Y/C (S-VIDEO) 1CH:S terminal (with loop through)
RGB/Component Input	
Signal and Connector	R,G,B or Y,Pb,Pr 1CH:HD-15 [D-Sub 15pin] (with loop through)
DVI Input	
Signal and Connector	DVI-D (equipped with cable compensation equipment:Max.30m) 2CH:DVI-D 24pin Max. clock 162MHz (with loop through 1CH)
SDI Input	
Signal and Connector	3G-SDI (Level A)/HD-SDI/SD-SDI 2CH:BNC (with loop through 2CH)
3D display	Available for signals :1080i / 50, 60,1080P / 50, 60 Input : SDI / DVI Type of signals : Simul, Side by side (Half), Side by side (T2), Top and bottom, Line by line
DC5V Output	1A output
Safety Approval	ANSI/AAMI ES60601-1, CSA C22.2 No. 60601-1, EN60601-1, GB4943.1-2011
EMC	FCC Class A, VCCI Class A EN60601-1-2, GB9254-2008 (Class A) GB17625.1-2012
Power Requirement	Monitor : DC 24V ±1V AC adapter : 100 to 120V/200 to 240V
Power Consumption	100W or less
Ambient Temperature	+5°C to +35°C
Dimensions	W640 × H405 × D84mm (excluding protrusions)
Weight	approx. 8.3kg (excluding stand)

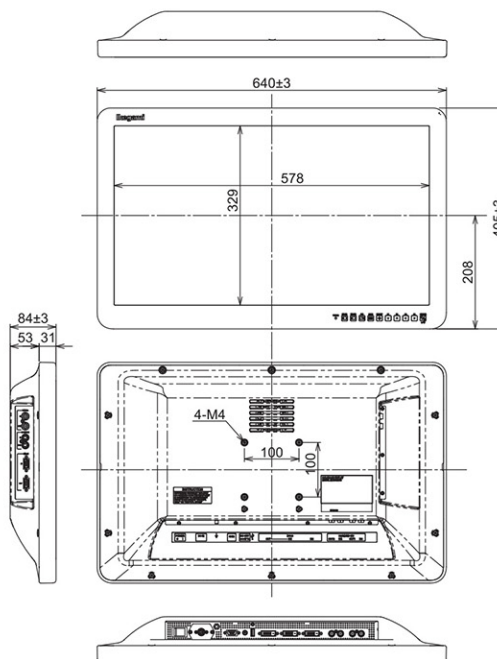#### ■ Available Display Signal for DVI-D/HD15 (D-Sub15p)

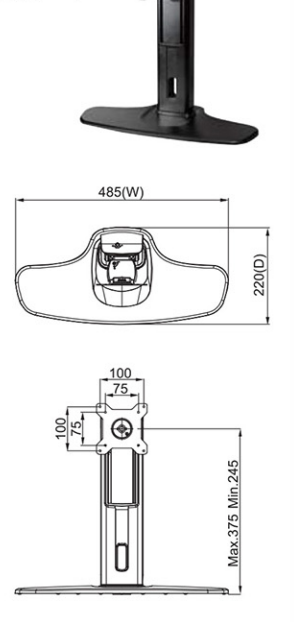| DVI-D	VGA, SVGA, XGA, SXGA, WUXGA 480i/60, 575i/50, 1080i/60, 1080i/50, 720P/60, 720P/50, 1080P/60, 1080P/50
HD15 (D-Sub15p)	VGA, SVGA, XGA, SXGA, WUXGA 480i/60*, 575i/50*, 1080i/60*, 1080i/50*, 720P/60, 720P/50, 1080P/60, 1080P/50

* Available for only G-Sync

■ Connectors

■ Dimensions (mm)

640±3
578
329
405±3
208
84±3
53 31
4-M4
100
100

TS-300
(option)

485(W)
220(D)
100
75
100
75
Max.375 Min.245

Ikegami

Precision Imagery for Critical Applications

[24-inch Medical Grade LCD Color Monitor]

MLW-2424C-DC

The MLW-2424C-DC is a wide screen 24-inch LCD monitor providing a high-definition image, with the color reproduction and functionality required in the medical field. It is designed with a flat front panel, with no vents or fans.

Pursuing the exceptional quality for medical applications

10-bit IPS Panel with LED Backlight

This monitor is fitted with a high brightness IPS panel with wide viewing angle of 178 degrees up/down and left/right. The energy saving LED backlit panel reduces power consumption by 50% compared with the previous model. 12-bit signal processing and 10-bit LCD panel support smooth gradation.

Wide Color Gamut

The MLW-2424C-DC realizes a wide color gamut of DIC 98% and Adobe RGB 99%, superior to standard monitors conforming to BT709/SMPTE. It provides a wide color gamut in red, and true color reproduction required in the medical field.

Variety of friendly features

Two Screen Display

SDI and another input signal can be displayed simultaneously with side-by-side or picture-in-picture display modes.

Signal combinations	• SDI & DVI-D • SDI & S-VIDEO • SDI & Component • SDI & RGB • SDI & VIDEO

■ side-by-side   ■ picture-in-picture

Function Key

For convenient use, a frequently used function can be assigned to the Function key to select instantly.

Flip Function

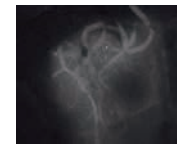Images can be flipped horizontally and vertically.

Touch Switch

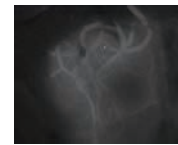A touch switch is fitted for easy operation.

Dynamic Image Contrast Enhancer

By calculating the brightness of the entire screen and extending the dynamic range between white and black in real time, automatically optimized black level and high contrast are achieved.

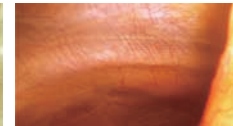■ Function ON   ■ Function OFF

Still Image

It is possible to check with a still image against the current video.
The input video and memorized still image can be compared on the screen.

Hyper Image Enhancer

By controlling the chromaticity, luminance, and edge enhancement of a specific color space, the MLW-2424C-DC is able to improve the reproduction of difficult areas within a picture.

■ Function ON   ■ Function OFF

No Vent Structure

This monitor is cooled by air convection without vents and fans which allows easy cleaning.

* The picture is a composite image.

■ Specifications

LCD Panel Size	24-inch
Backlight System	LED
Display Size	518.4(H) × 324(V)mm
View Angle	178° (up&down / left&right)
Maximum Brightness	400cd/m² (Typical)
Contrast Ratio	1500:1 (Typical)
Pixels	1920(H) × 1200(V)
Color Gradient	1,073,740,000
Color Reproduction Range	Adobe RGB 99%, DCI 98%
VIDEO Input	
Signal and Connector	composite (VBS) 1CH:BNC (with loop through)
	Y/C (S-VIDEO) 1CH:S terminal (with loop through)
RGB/Component Input	
Signal and Connector	R,G,B or Y,Pb,Pr 1CH:HD-15 [D-Sub 15pin] (with loop through)
DVI Input	
Signal and Connector	DVI-D (equipped with cable compensation equipment:Max.30m) 1CH:DVI-D 24pin Max. clock 162MHz
SDI Input	
Signal and Connector	3G-SDI (Level A)/HD-SDI/SD-SDI 1CH:BNC (with loop through)
DC5V Output	1A output
Safety Approval	ANSI/AAMI ES60601-1, CSA C22.2 No. 60601-1, EN60601-1, GB4943.1-2011
EMC	FCC Class A, VCCI Class A EN60601-1-2, GB9254-2008 (Class A) GB17625.1-2012
Power Requirement	Monitor : DC 24V ±1V AC adapter : 100-120V/200-240V
Power Consumption	65W or less
Ambient Temperature	+5°C to +35°C
Dimensions	W584 × H400 × D83mm (excluding protrusions)
Weight	approx. 7.5kg (excluding stand)

■ Available Display Signal for DVI-D/HD15 (D-Sub15p)
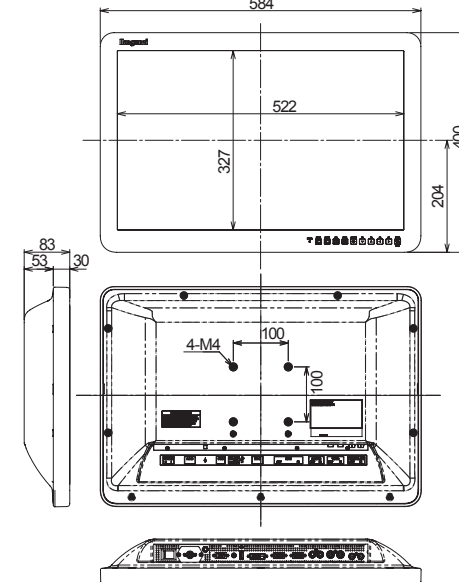
DVI-D	VGA, SVGA, XGA, SXGA, WUXGA 480i/60, 575i/50, 1080i/60, 1080i/50, 720P/60, 720P/50, 1080P/60, 1080P/50
HD15 (D-Sub15p)	VGA, SVGA, XGA, SXGA, WUXGA 480i/60*, 575i/50*, 1080i/60*, 1080i/50*, 720P/60, 720P/50, 1080P/60, 1080P/50

* Available for only G-Sync

Design and specifications are subject to change without notice.

■ Connector

| POWER O F | DC IN | ⎓ | COM | DC OUT ⎓+5V 1A | USB | DVI-D | OUT HD15 IN | S-VIDEO OUT IN | VIDEO OUT IN | 3G/HD/SD SDI OUT IN |

■ Dimensions (mm)

584
522
327
83
53 30
400
204
4-M4 100
100

TS-300 (option)

485(W)
220(D)
100
75
100
75
Max.375 Min.245

Ikegami

Medical Grade Digital Video Recorder

MDR-600HD

◆ **High Quality** - Full HD

◆ **User Friendly** - Simple Operation

◆ **Standalone + Dual Recording**

◆ **Network Transfer***

★ This may be an option in some regions.

Ikegami's medical grade digital video recorder MDR-600HD brings high quality and convenience.

High Definition Medical Image & Video Recorder. Various types of video signals (SD & HD) can be recorded by simple operation. Reliable simultaneous recording and playback feature on Internal HDD or External USB-device are also available.

System Configuration (example)

Operating room

Medical Grade Camera

Ikegami Medical Grade Cameras

OR

Other Cameras

External media (2 USB memory)
Internal HDD

Save

Ikegami Medical Grade Cameras

Input*1

MDR-600HD

Output*1

LAN*2

PC

Monitor

*1 Digital:SD-SDI/HD-HDI/DVI-D Analog:COMPOSITE/S-VIDEO.Input signal and output signal must be same.
*2 This may be an option in some regions.

High Quality	User Friendly	Standalone +	Network Transfer*
Full HD	Simple Operation	Dual Recording	★ This may be an option in some regions.

Key Features

▌ High Quality Video and Still Image

High quality SD/HD video and still image (640x480 to 1920x1080) can be recorded and playbacked simultaneously.

▌ Dual Recording Feature

Simultaneous recording feature on Internal HDD* and External USB device secure data reliability. Maximum 3-way recording (Internal HDD and 2x USB devices) is available.

★ Internal HDD can be used to back up data.

▌ Auto-Signal Detection & Auto-Resolution Following

Simply connect with video input device, it enables the auto-signal detection, the auto-resolution following feature and quick-start.

▌ Image-Data Transfer Feature

Transferring data using LAN*, retrieving data from internal HDD or mass storage device using USB cable, and auto forwarding to FTP/CIFS server* are available.

★ These functions may be options in some regions.

▌ Various Search Feature

Patient data (Date, ID, Name, DOB, Sex) can be searched and reproduced quickly.

▌ Simultaneous Recording and Playback Feature

Still image can be saved during video recording, also video or still image can be playbacked during video recording period.

▌ Simple Operation

Just one button "Video" can start recording video, also just "Photo" button can start recording still image.

▌ Built-in LCD Monitor

Recording or Playbacking video can be checked on a LCD monitor. Also unit status and remaining data space can be displayed.

▌ External Contact Switch

External contact (foot) switch can control recording start, stop and hold.

▌ Compact Design

Achieved high-performance and compact body.

Recording Time

SD(640×480)

Media	5Mbps	8 Mbps	10Mbps
HDD(500GB)*	180 hours	135 hours	100 hours
External Media(1TB)	360 hours	270 hours	200 hours

HD(1920 x1080)

Media	12Mbps	18 Mbps	24 Mbps
HDD(500GB)*	90 hours	60 hours	45 hours
External Media(1TB)	180 hours	120 hours	90 hours

★ If free space is less than 100GB, data will be deleted from old ones.

Rating · Performance

Recording Media	
Internal	2.5-inch HDD (Data capacity 450GByte)
External	USB drive (Flash Memory or HDD) ★USB memory has no warranty.
Display	3.5-inch, Full Color LCD

Input Signal		
Video	Analog (NTSC/PAL)	
	COMPOSITE	1.0 Vp-p 75Ω
	S-VIDEO	1.0 Vp-p 75Ω luminance signal
	NTSC	0.286 Vp-p 75Ω chrominance signal
	PAL	0.3 Vp-p 75Ω chrominance signal
	Digital (High Resolution Video)	
	SD	SD-SDI NTSC(480i),PAL(576i)
	HD-SDI	1080p,1080i,720p
	DVI-D	640 x 480 - 1920 x 1200 (1920 x 1200 will be reduced to 1728 x 1080)
Audio	- 8dBs 10kΩ or more, unbalance SDI video input terminal φ3.5 stereo mini-jack ×2 Audio,MIC	

Output Signal		
Video	Analog (NTSC/PAL)	
	COMPOSITE	1.0 Vp-p 75Ω
	S-VIDEO	1.0 Vp-p 75Ω luminance signal
	NTSC	0.286 Vp-p 75Ω chrominance signal
	PAL	0.3 Vp-p 75Ω chrominance signal
	Digital (High Resolution Video)	
	SDI	SD-SDI NTSC(480i),PAL(576i)
	HD-SDI	1080p,1080i,720p
	DVI-D	640 x 480 - 1920 x 1200
Audio	-8dBs 1kΩ unbalance SDI video input terminal φ3.5 stereo mini-jack ×1 Audio	

Interface	
LAN	RJ45 (100Base-TX/1000Base-T)(This function may be an option in some regions.)
USB-A	Recording x 2 (Front USB2.0)
USB-B	For PC connection x 1 (Rear USB2.0)
REMOTE	2.5-inch mini-jack
Contact Switch	3.5-inch mini-jack, Video x 1, Photo x 1

External Recording Media	
USB Drive	Flash Memory or HDD
Format	FAT32

Video Data Process	
Still Image	JPEG
Video Compression	MPEG-4 AVC/H.264
File Format	mov
Recording Time	90 hours. (Internal HDD 500GB, EQ: Economy Quality)

Audio Data Process	
Compression	LPCM
Sampling Freq	48KHz
Quantifying Bit Number	16bit

Safety Regulation/EMC

Safety Regulation	IEC60601-1,CSA60601-1,EN60601-1,CE
EMC	IEC60601-1-2,CSA60601-1-2,EN60601-1-2,FCC class B
Certified	CSA NRTL/C,FDA

General

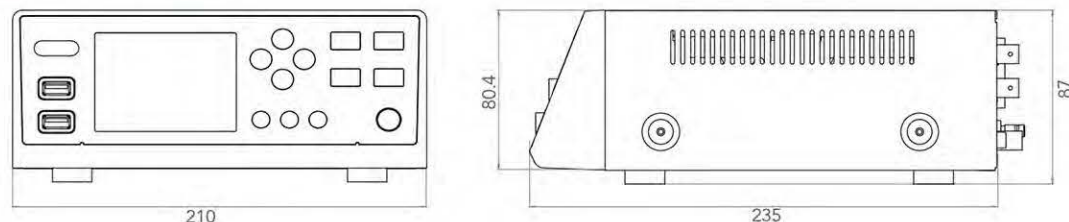| Power	AC 100V - 240V ±10% 50/60 Hz 0.62A - 0.35A	
Operating Environment	Temperature	5 - 40°C
	Humidity	5 - 80% RH (non-condensing)
Dimension	W210.5 x H88.5 x D235mm (incl.rubber foot)	
Weight	2.6 kg	
Standard Accessory	Power cord x 1、Instruction Manual	

Rear Panel

Optional Unit

USB Card Reader

USB Barcode Reader

Remote Controller

Foot Switch

Dimensions(Unit:mm)

EvolutionHD™

The Med X Change EvolutionHD™ offers the latest in FULL 1080p video recording in a compact device all while delivering brilliant HD video quality designed for both Apple and Windows editing.

SUPPORT FOR FULL 1080P VIDEO RECORDING
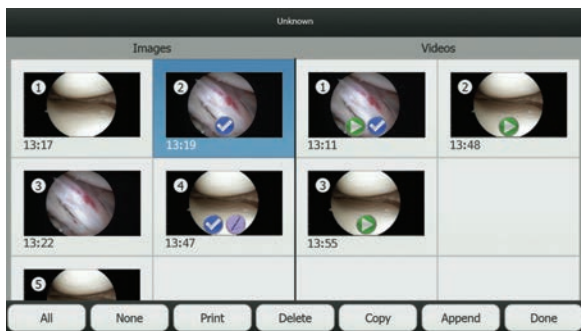With DVI or (3G) HD-SDI input for 1080p, 720p. NTSC & PAL

CAPTURE HD VIDEO & STILLS FROM HD MICROSCOPE/ENDOSCOPE
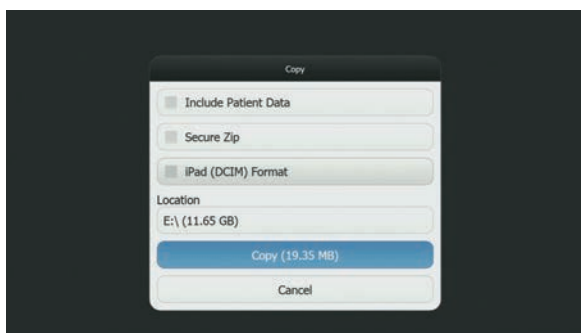Into H.264 .mp4/.mov/.avi, JPEG, BMP, PNG, DICOM

INTEGRATED 12.7CM DISPLAY
HDMI® Out clones the display of the main integrated screen, Live Video or User Interface.

MULTI LANGUAGE SUPPORT

ONE TOUCH RECORDING
From a remote, buttons, MedXStream™ App, or optional External Touch Screen.

APPLE iOS APP
Pair your iPhone, iPad or iPod Touch to your EvolutionHD™ with our MedXStream™ App where you can instantly access your Surgical Cases to Review, Annotate, Playback, and Download. Surgical Reporting, iOS6/iOS7 Compatibility and even a Remote Control Feature are also included. Visit medxstream.com for more information.

PRINTING/PLAYBACK/COPY
- Auto Print to Sony Medical Grade Printers
- Playback Video/Stills & Copy to external USB Media
- Still Image Enhancements

STORAGE
- Large Storage Capacity – 750 GB harddrive, approximately 100 hours of HD video
- Record to internal and external USB harddrive.

HIPAA SECURE FILES
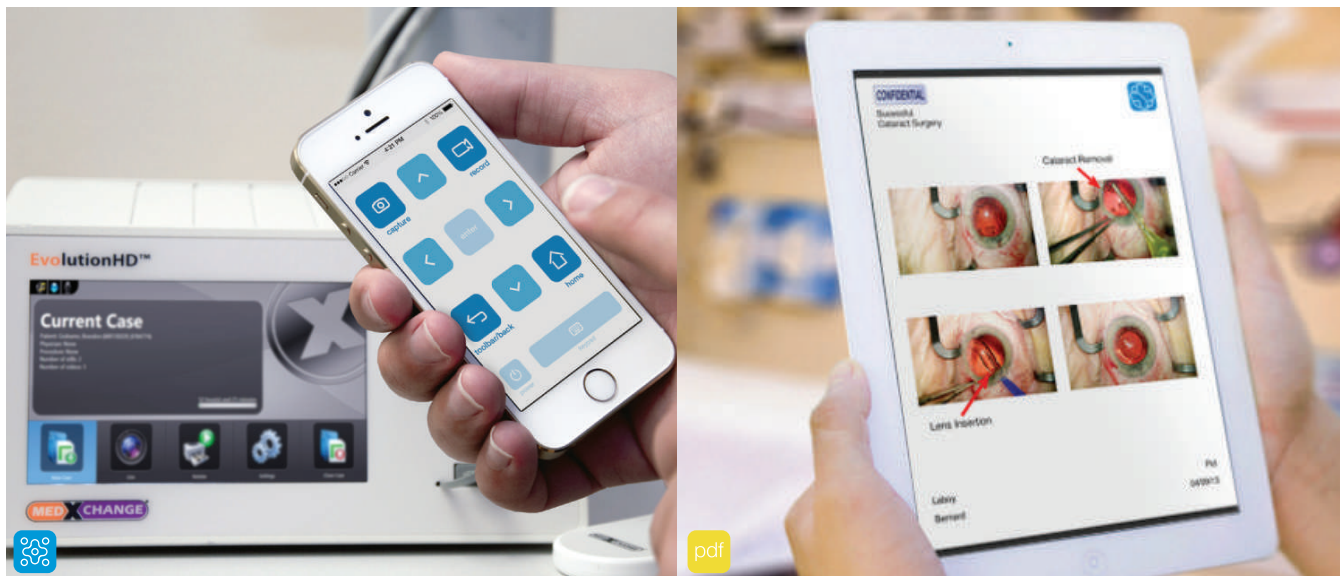- Encrypted Zip export, Surgeon Profiles, Username/Password security.

200mmx104mmx172mm

POST PRODUCTION
- Native Mac & Windows 7, 8 Editing – Edit with Final Cut Pro, Quicktime, iMovie or Adobe Premier Pro.

Power Requirements: 5V DCA, 25w
Medical Compliance: CE, TUV, CAN/CSA 22.2 No. 601.1-M90
UL60601-1:2003, IEC 60601-1-2:2007, IEC 3rd Edition
ISO 13485 Certified

inspire
Healthcare

The new Med X Change® MedXStream™ iPad/iPhone App offers the ability to pair with our EvolutionHD Recorder and our other Recorders in the future. This can be done in the O.R. during or post case. Install our MedXStream™ app on your Apple iPad, iPhone or iPod Touch, connect securely and wirelessly to your EvolutionHD and instantly access your Surgical Cases to Review, Annotate, Playback, Download, Surgical Reporting, iOS6/iOS7 Compatibility and even a Remote Control Feature. Subscribe to our MedXStream™ Email List for updates and first access to our o cial launch date in the "Subscribe for Updates" tab at medxstream.com.

App Features

Wireless Connectivity	Add Custom Annotations	Pre-load Patient Cases
Data Encryption	PDF Surgical Reporting	Still Image Annotation/Drawing
Download 1080p Video/Still images	Email PDF Surgical Reports	Eye Catching User Friendly Design
Portably edit videos & presentations	Create and send Cover Sheets	Export Videos to iMovie™ in our app
Airplay to Apple TV	Wirelessly Control to EvolutionHD	Export Stills to iPhoto™ in our app
AirPrint	WorkList Connectivity	Export Videos/Stills to DropBox™

4K UHD MEDICAL VIDEO RECORDER

Evolution4K™

The Med X Change, Inc. Evolution4K offers the latest in 4K UHD video recording in a compact device all while delivering brilliant 4K UHD video quality designed for both Apple and Windows editing.

4K UHD OR HD VIDEO/STILL IMAGE RECORDING

- Two Models: 1x **HDMI 2.0** or 4x **3G-SDI**
- 4K UHD 60Hz input: 1x **HDMI 2.0** or 4x **3G-SDI**
- 4K UHD 60Hz output: 1x **HDMI 2.0** or 4x **3G-SDI**
- 4096x2160p or 3840x2160p 50/60Hz
- Recorded/Captured files: H.264 .mp4, JPEG, PNG

INTEGRATED 12CM TOUCH LCD SCREEN

- Control software from integrated multi touch screen

PATIENT DATA ENTRY

- Add Patient info before case
- Sort by fields (Name, Study Date, Patient ID)

PRINTING/PLAYBACK/COPY USB 3.0

- Auto Print to Sony Medical Grade UP-DR80MD
- Playback Video/Stills & Copy to external USB Media

EVO4K200 Model
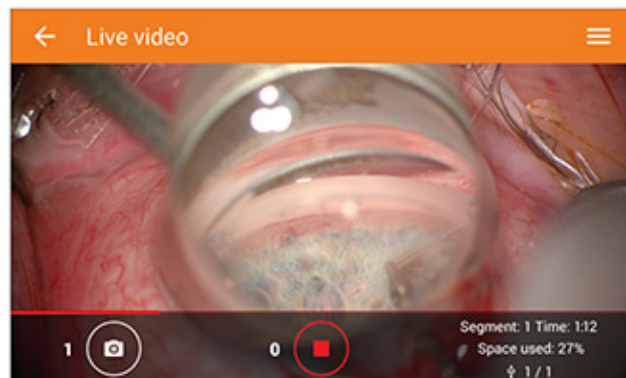
ONE TOUCH RECORDING

- Record 4K UHD Video and capture still images simultaneously with Integrated 12cm Touch Screen, endoscopy camera head buttons, microscope triggers, foot pedal, etc.
- Record to internal hard drive and 2x USB 3.0 Locations at same time

EVO4K200 Model
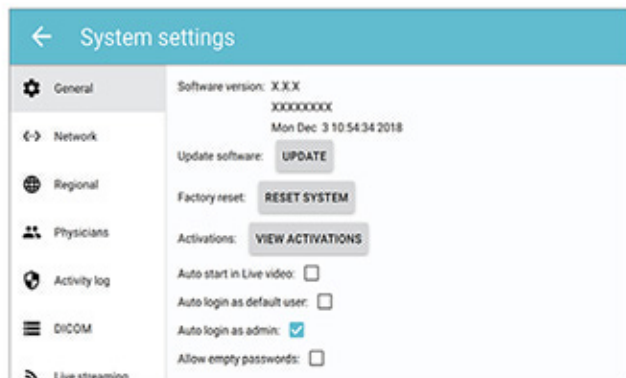
SETTINGS, OTHER

- Networking, Media and Printing Settings
- Simple USB Software Update
- HIPAA Compliance, Encryption, Auditing, User/Admin Roles
- Embedded Linux OS
- Cyber Security Compliance

Medical Compliance: 60601-1: 2005/A1: 2012, 60601-1.2: 2014
ISO 13485 Certified

4K UHD MEDICAL VIDEO RECORDER
Evolution4K™
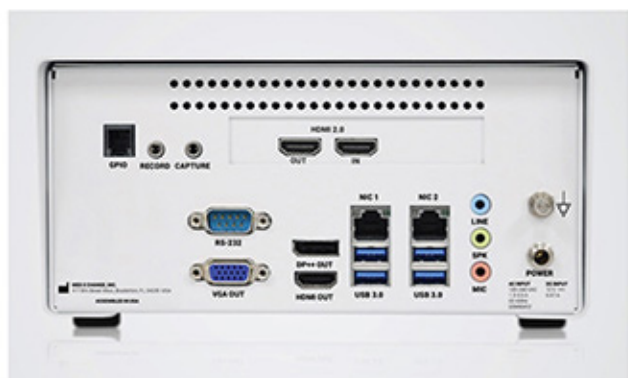
EVO4K100 (1x HDMI 2.0)

EVO4K200 (4x 3G-SDI)

ACCESSORY PACK CONTENTS
- 1x User Manual download card
- 1x 6' Medical Grade power cable
- 1x Wireless Keyboard
- 1x AC/DC Medical Grade power supply
- 1x 6' HDMI cable (EVO4K100 Only)
- 4x 6' 3G-SDI cables (EVO4K200 Only)
- 2x 3.5mm Stereo cables

SPECIFICATIONS
- 1x HDMI 2.0 In/Out
- 4x 3G-SDI In/Out
- 1TB, 2TB or 4TB Internal Harddrive
- 6x USB 3.0 ports
- 2x 3.5mm camera trigger ports
- GPIO & RS-232 ports
- Mic audio input port
- Still images: PNG, JPG
- Video files: H.264 .mp4
- 2x Gigabit network ports (Active with future update)
- Dimensions: 10.69cm H x 20.92cm W x 24.64cm D

Medical Compliance: 60601-1: 2005/A1: 2012, 60601-1.2: 2014
ISO 13485 Certified

EXTERNAL TOUCH MONITOR SUPPORT
- Multiple HID Touch Screens are supported via USB
- Duplicate the internal 12cm Touch Screens to a external Touch monitor via the Secondary Display Ports (DP, HDMI or VGA)
- Two of the 3 ports can be used at simultaneously for multiple external displays.

SUPPORTED CAMERA/VIDEO RESOLUTIONS
- 4K & 4K UHD: 4096x2160p & 3840x2160p: 50/60Hz
- Typical HD: 1080p, 1080i, 720p
- 4K/UHD Hz: 60, 59.94, 50, 30, 29.97, 25, 24, 23.98
- 1080p Hz: 60, 59.94, 50, 30, 29.97, 25, 24, 23.98
- 1080i Hz: 60, 59.94, 50
- 720p Hz: 60, 59.94, 50
- 3D HD Side by Side:1080p, 1080i, 720p
- 3D HD Top/Bottom: 1080p, 720p
- Others: 1920x1200p,1600x1200p, 1440x1050p, 1280x1024p, 1280x960p, 1360x768p, 1280x768p, 1024x768p, 800x600p, 640x480p

STILL IMAGE CAPTURE
- HD = 1920 pixels (H) x 1080 pixels (V) = 2 MP
- UHD = 3840 pixels (H) x 2160 pixels (V) = 8 MP
- 4K = 4096 pixels (H) x 2160 pixels (V) = 9 MP

3D HD RECORDING
- Accepts and records 3D HD via HDMI input at Side by Side or Top/Bottom formatting*

The video coming in via HDMI must already be multiplexed to 3D formatting via a 3D Multiplexer device.

CYBER SECURITY COMPLIANCE
- Audit logging/controls
- Individual user accounts
- Admin role
- User account management
- ePHI is encrypted at rest and in transit using AES-256
- Session timeout
- Etc.

 Authorised Reseller

High Definition Digital Recording System

DRSHD™ 1080p

The DRSHD 1080p offers the latest in FULL 1080p video recording with a full-featured GUI (Graphical User Interface). This is a first-in-class documentation system to offer 1080p video recording complementing the new 1080p cameras in the marketplace. 1080p (1920x1080 progressive) video resolution is the current benchmark for the highest quality and most accurate method to display video in the OR.

Full 1080p Video
• Support for Full 1080p Video Recording with DVI input for 1080p, 1080i, 720p NTSC & PAL

Apple iPad® Integration
• Copy videos and stills to a SD card and plug directly into an iPad® tablet

Recording Capabilities
• Captures HD Video (1920x1080) & Stills (1280x720) from HD Endoscopy Camera into H.264 .MP4, MPEG-4 WMV, JPEG & BMP
• Captures Standard Definition (NTSC & PAL) Video & Still Images
• Audible Feedback – Confirms Pause, Record, and Still Capture
• Dual Channel Simultaneous Recording

DICOM
• DICOM/PACS Server Connectivity with DICOM Modality Worklist or Local Worklist mode
• HL7 Compliance

Annotation
• Easily add text annotations to video and still images during recording or editing processes

Features
• Blu Ray Data Disc up to 12x write speed
• Integrated Camera Controls (Endoscopy camera head)
• Integrated GPIO port (RJ12 connector) which can send signal to main OR monitor for record and still confirmation (No need for Sony Izziton Cable)

Printing
• Print still images to Sony Medical Grade Printers and other Microsoft Windows XP Compatible Printers including network printers
• Image Enhancements: Gamma, Brightness, Sharpness, Histogram, Contrast, Saturation & Hue
• Auto Print features during live recording

Storage
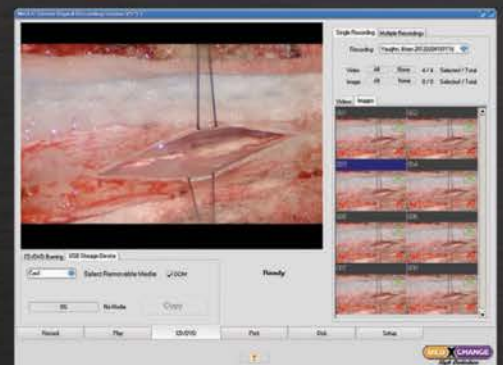• Large Storage Capacity – 2 TB Hard Drive, approximately 170 hours of HD video
• Record/Burn videos and still images to CD/DVD/USB/Network Storage Device
• Embedded OS (Operating System)

Medical Compliance
• CE, TUV
• UL60601-1:2003, IEC 60601-1-2:2007, IEC 3rd Edition
• CAN/CSA 22.2 No. 601.1-M90

Record - Capture from 1080p HD video

DCIM feature for iPad® connectivity
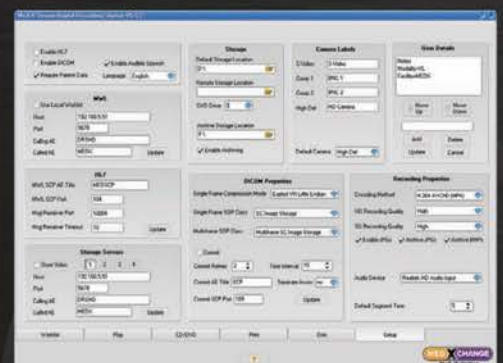
Encode recordings in H.264 AVCHD .MP4

MedX Storage Server (MDSS)

Content Management System supplying centralized secure access to case media files

The MedX Storage Server (MDSS) is a digital content management system designed to be a central location/archive for surgical video and images to be securely stored for local or remote access by medical professionals and authorized users.

The MDSS is designed to be connected to a facility's network (Server, VM, Cloud). Once installed, it can receive case media files from authorized medical video recorders with a network path to the MDSS. Users and software administrators can access these case media files and configure the MDSS software through any web browser with network access.

OPERATING ROOMS

Medical Video/Capture System (SCU)

Medical Video/Capture System (SCU)

Medical Video/Capture System (SCU)

Medical Video/Capture System (SCU)

MEDX STORAGE SERVER (MDSS)

Content Management System

4K

HD

SECURE ACCESS

Easy access on Phone, Tablet, Computer, etc.

Use for Education/Training, Post-Procedure Consultation & Post-Case Editing/Reviewing

The MDSS also provides software administrators the ability to manage the device, users, and media files too. When pre-installed on server hardware, the device will consist of a single enclosure containing server class computer hardware and utilize the Ubuntu 18.04 LTS (or later) operating system as a platform foundation.

MED**X**CHANGE

MEDXCHANGE.COM
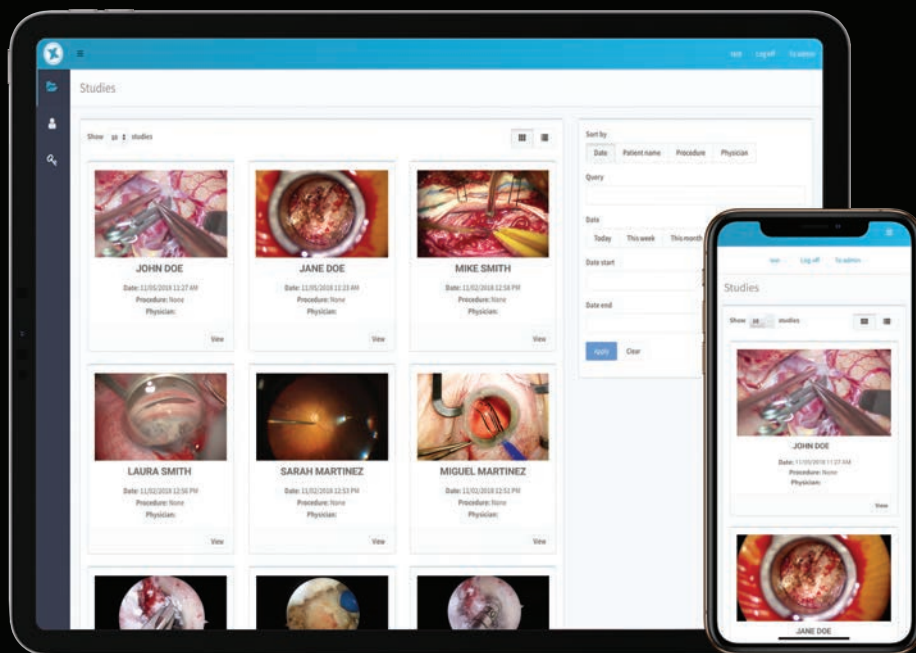
MDSS MAIN FUNCTIONS

- HTTPS Local and Remote network secure access
- Central location for all recorder platforms with DICOM C-Store protocols
- Centralized encrypted archive for case media files
- Local or Remote access based on facility managed permissions:
  - Physician access
  - Patient portal access
- View, search, sort, playback, edit, download and share content
- Library of cases, video, images, ePHI, keywords, procedures, etc.
- SD/HD/4K medial videos
- SD/HD/4K medical video playback and segmentation
- SD/HD/4K still photos
- Create reports and report configurations
- RAID mirroring backup
- HIPAA/Cyber Security compliant
- Option for OEM re-branding

REQUIREMENTS

- Linux e.g. Ubuntu 18.04 LTS (Preferred) or Windows Server 2016 with Hyper-v
- Network access (internet connectivity for automatic updates)
- 8GB of memory
- 32GB SSD for O/S and Software, Additional disks for storage
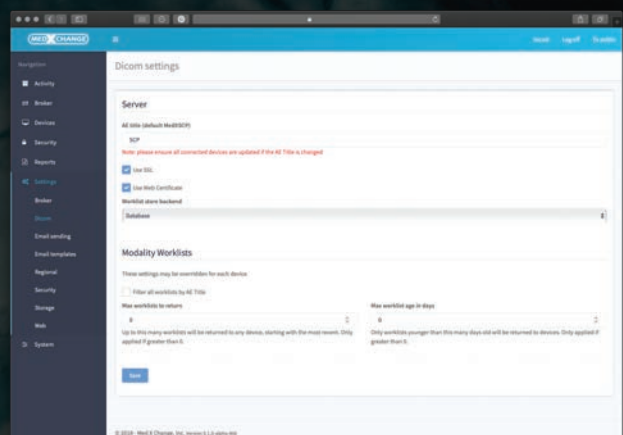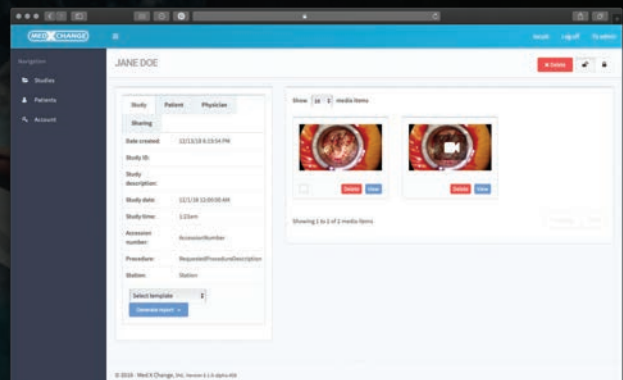
MEDXCHANGE

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ISO 13485 Certified

U5000-00, 1.0

Haivision

Viper

All-in-One Capture, Stream, Record, and VOD Appliance

Corporate Presentations, Classrooms, Medical Procedures The Viper™ is a compact, completely integrated platform for capturing, streaming, reviewing, transcoding, distributing and publishing rich, multi-stream high definition content. The Viper is available as a standalone appliance which can be paired as a content contributor to the Furnace™ IP video distribution system and Haivision Video Cloud. The Viper combines the power of dual-channel real-time HD H.264 encoding, performance recording, a streaming server, a multi-stream player manager, and a video-on-demand server, in a single appliance with simple touch operation.

Dual Channel HD for Rich Media Situational training, skills assessment, advanced instruction and detailed presentations rely on a combination of live speakers, media-rich presentations, and real-time videos, as well as information from software that creates spreadsheets, computer-aided design tools and simulators. In order to effectively transmit the in-room presentation experience live via IP video streaming, or to review the experience on-demand at a later time, both the live camera and the associated real-time media display must be available to out-of-room viewers.

One-Touch Operation - Record, Review, Stream, Publish With Viper, setting up, streaming, recording, and publishing your rich media event has never been easier. Without the need to rely on any central server infrastructure and without any endpoint player to install or specific browser technology required, a single operator can deliver multiple streams of HD throughout a facility or across a campus with a few simple taps on the Viper's touchscreen. A simple link is all you need to securely enable any user with real-time, multi-stream live or on-demand synchronized HD.

Product Features   Product Benefits

Product Features	Product Benefits
Complete streaming system	No need for separate infrastructure, serves live and on-demand multi-stream directly
Dual stream synchronized HD	Capture & stream events in full context
Live Internet streaming	Broadcast live streams to a CDN running over Akamai 1stGen - HD2 or Flash Media Server, via RTMP
Cloud integration	Share content created on the Viper into the Haivision Video Cloud
Graphics content captured at full frame rate	Fluid replay of rich media presentations
Graphics captured through VGA/DVI	Capture content on any computer in real-time (not just PowerPoint®)
Restful API	Extend Viper's recording, streaming, publishing commands to 3rd party control panels
Onboard file transcoding	Take a Viper asset and make an AVI, WMV, MOV or MP4 and then save it to USB
Streamline touchscreen interface	Be one click away from recording and streaming - user-centric, simple-to-use interface
Secure, "zero install" InStream player	No endpoint viewing software to install, cross-platform consistent media delivery
Flexible multi-stream layouts	Administrators/users determine how to best view the rich media, multi-stream live or on-demand
Furnace compatible realm device	Fuel a central Furnace IP video system with user-generated content
Fully secure media distribution	Establish standalone conditional access or inherit user privileges from the Furnace
Inputs captured as independent streams	Presenter does not need to be concerned with layout decisions

AV INPUT SPECIFICATIONS

Video (Inputs):
2 x DVI-I
    Y, Pb, Pr / RGBHV component analog
    Y, Cb, Cr / DVI component digital
S-Video   NTSC/PAL
Composite   NTSC/PAL
SD-SDI   SMPTE 259M-C
HD-SDI   SMPTE 292M, 274M, 296M
3G-SDI   SMPTE 424M, 425M

Video Resolutions:
1920x1080p 60/59.94/50/30/29.97/25 Hz
1920x1080i 60/59.94/50 Hz
1280x720p 60/59.94/50/30/29.97/25 Hz
1280x720p 60/59.94/50/30/29.97/25 Hz
720x480/576p 60/59.54/50 Hz
(interlaced shown in fields per second)

Computer Resolutions:
1920x1080 60 Hz *
1280x1024 75/60 Hz *
1280x768 85/75/60 Hz
1280x720 60 Hz
1024x768 85/75/60 Hz

Audio (Input):
1/8" (3.5mm) Mini
    Unbalanced stereo analog audio
XLR
    Balanced stereo analog audio
RCA Audio
    Unbalanced stereo analog audio
SDI Embedded Audio
    SDI-1-2 and SDI 3-4

* Dual stream high resolution (1080p) must fit within a 60 fps total budget.

AV OUPUT SPECIFICATIONS

Video (Outputs):
HDMI: 1920x1080
VGA: 1920x1080
Audio (Output):
1/8" (3.5mm) Mini
    Unbalanced stereo analog audio

ADVANCED FEATURES

Dual quality streaming
HD/SD de-interlacing
Built-in downscaling
Deblocking filter
Color space configuration (DVI) (Auto Detect)

VIDEO ENCODING

Compression Standard:
H.264 (MPEG-4 AVC part 10)
    ISO/IEC 14496-10
Baseline Profile
    Level 4.2 and lower intermediate levels
    I, IP framing
    Configurable Group of Picture (GOP) size
    Configurable frame rate
Bitrates:
    SD/HD from 150 kbps to 15 Mbps
Rate Control:
    VBR
Latency (encode only):
    Less than 100ms

AUDIO ENCODING

Compression Standard:
    MPEG-2 AAC-LC ISO/IEC 13818-7
    MPEG-4 AAC-LC ISO/IEC 14496-3
Audio Channels:
    2 per video channel
Bitrates:
    From 32 to 448 kbps per audio pair
Frequency Response:
    From 20 Hz to 22 kHz

IP NETWORK INTERFACES

Standard:
    2x Ethernet 10/100/1000 Base-T, auto-detect,
    Half/Full-duplex
Connector:
    RJ45
Networking Protocols:
    Unicast streaming
    Multicast streaming (IGMP v3)
    MPEG transport stream over UDP
    RTMP

MANAGEMENT INTERFACE

Management:
    HTTPS (Web browser)
    LCD Touchpanel
    HTTPS (REST API)

PHYSICALS

Dimensions :
    108mm H x 219mm W x 267mm D
Weight:
    10 lbs. Approx.
Power:
    100-240VAC external locking power supply
Temperature:
    Operating: 0C to 50C
    Non-operating: -40C to 70C
Humidity:
    Up to 95% non-condensing.
Storage:
    750GB SATA 3Gb/s
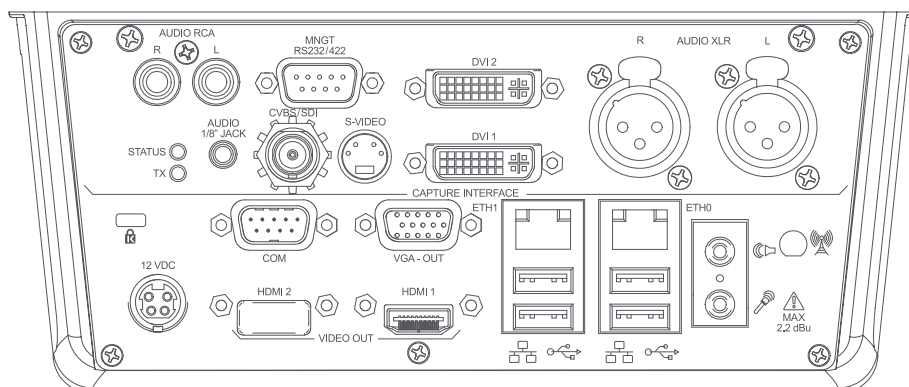
Viper

Viper Product Portfolio & Ordering Information **

| Viper | S-VI-MAX | Viper - For standalone use with an integrated InStream server or with a central Furnace system. Dual HD stream, record, VOD, publish appliance. Conditional Access module sold separately. |

** For complete pricing and ordering, contact us at sales@haivision.com or your certified Haivison reseller.

OR INTEGRATION SYSTEM

Description: OR Integration refers to the ability to manage the various data modalities in an operating room, including video, audio, and digital images. These images need to be displayed, routed, archived and controlled while operating. Vision OR is designed to maximize control in the operating room by the surgeon and make directing colleagues attention in or outside the OR easy. The handy hardware and sophisticated software, bundle together to provide the ultimate hive of OR data activity. Vision OR can scale, format, and split video signals based upon what is needed. The system features 10 input and 5-output capability.

General Specifications

Item	Description
Input - standard configuration	DVI-D x 2, VGA (D-sub) x 1, Component (BNC) x 1, C-Video (BNC) x 2, S-Video (DIN) x 2, SD/HD/3G-SDI (BNC) x 2
Input - available options	Additional DVI-D, Optical Fiber
Output - standard configuration	DVI-D x 4, RS232C x 4, SD/HD/3G-SDI (BNC) x 2, Streaming/ Additional DVI-D
Output - available options	SD/HD/3G-SDI (BNC), Optical Fiber (SC)
Control key	7 button (Display, Source, Plus, Minus, Select, PiP, Stream)
OSD language	English
Power	AC 100~240V / 50~60Hz , 2A (max)
Serial communication	RS-232C 115200 baud Rx
Network	Ethernet TCP/IP 10/100 base TX (Auto sensing)
Compliance & Certifications	FDA Class I, UL 60601-1, CAN/CSA-C22.2 No.601.1-M90, FCC Part 15 Class B, MDD Class I, IEC60601-1, EN60601-1-2, CCC & IEC60950-1

Special Features:
- Open architecture - Any image routable to any device. Compatible with any image from any piece of equipment, including endoscopes, robotics, C-arms and PACS.
- Full HD based video routing.
- Universal Ports for seamless connections
- Customized interfacing as per OT requirements.
- User-friendly, easy-to-use, all device one point control at surgeon fingertips.
- Picture-in-picture, picture-by-picture, picture-on-picture capabilities
- Configure video distribution via touch screen tablet interface
- Upgrades and maintains signal integrity

INTEGRATION READY CABLING FOR OPERATING ROOM
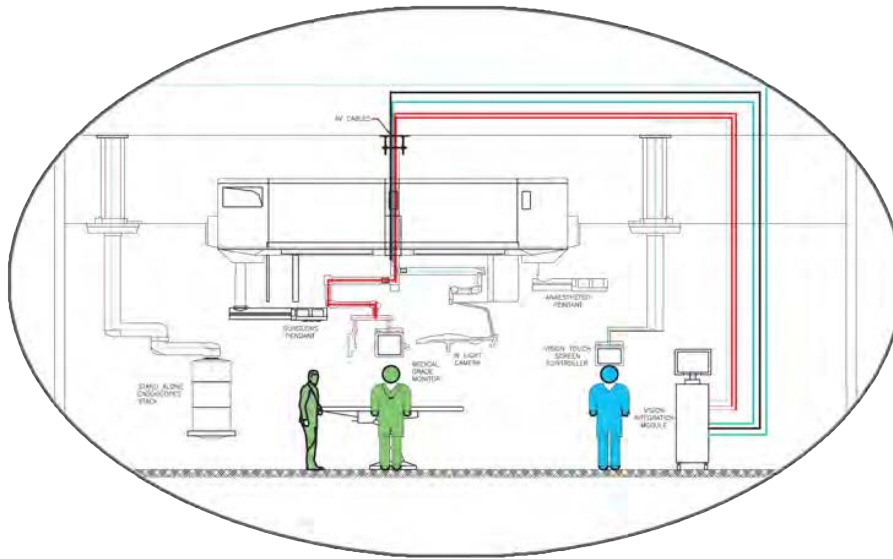
(A) Medical Grade High Definition Fiber Optic Cabling
- Spring Arm Surgical Monitor
- Endoscope/Laparoscope/Operating Microscope/Robotics

Description:
The above modalities will be connected via High Definition optical fiber cables using DVI connectivity.

(B) Other modalities
- In-room Camera
- In-Light Camera
- Doctors Workstation (PACS)
- Wall Display

Description:
The above modalities will be connected using appropriate High Definition HDTV, high frequency Co-Axial and RGBHV cables.

(C) Cables for Device Control for the following:
- Spring Arm Monitor
- In-Light Camera

(D) Redundancy: Keeping the redundancy factor in mind following cables will be laid in addition to the above cables:
- Display Modalities
- Endoscope/Laparoscope/Operating Microscope/Robotics
- In-Light Camera
- Doctors Workstation (PACS)

(E) Patch Panels:
The cabling to terminate on faceplate on the pendant/OT wall on one side and on wall plate on the doctors workstation on the other to facilitate easy connectivity of the integration system & modalities.

(F) Makes: Recommended makes for the above are Kramer/Crestron/ Extron / AMP/Systimax
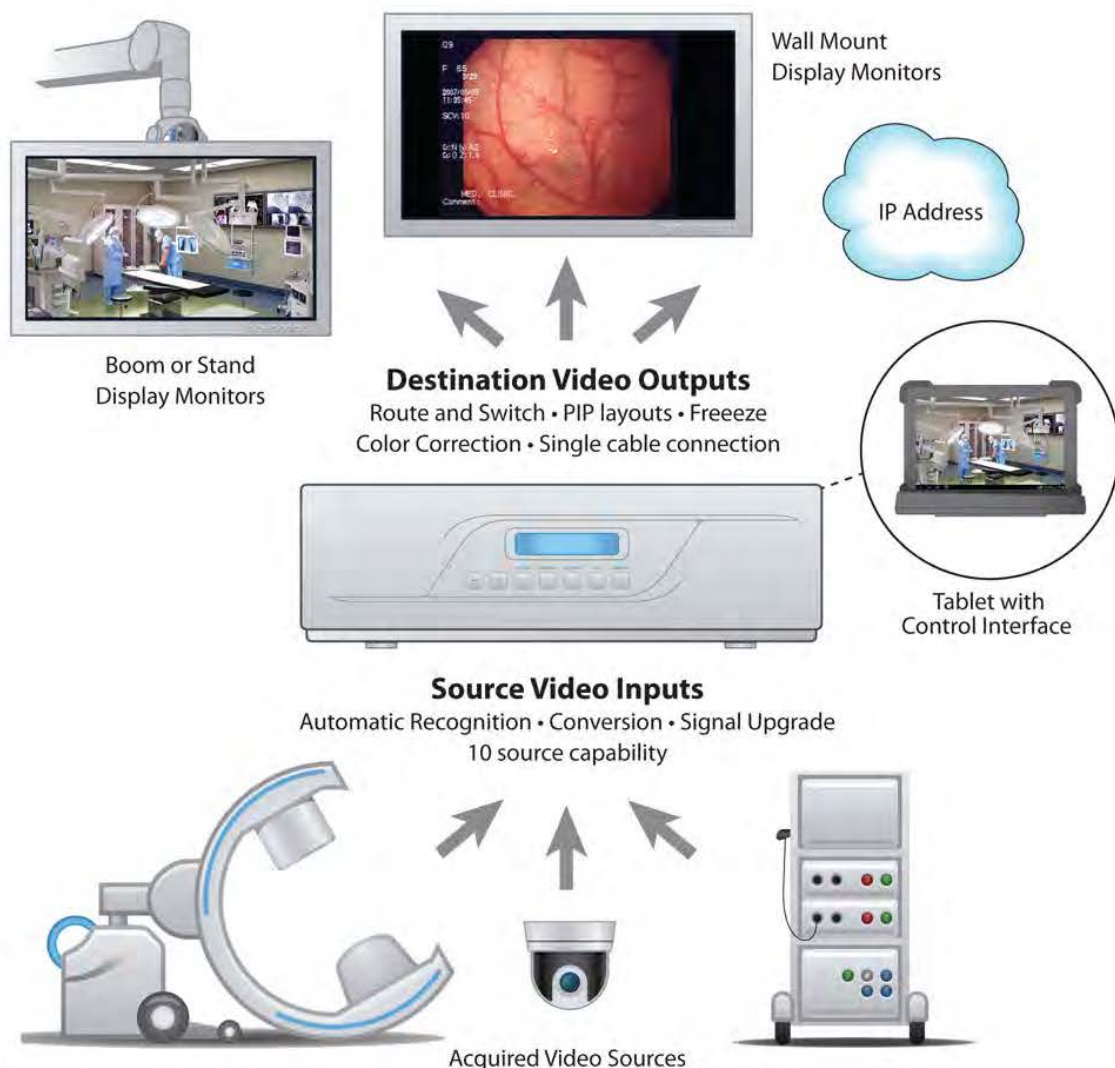
Control OR

Medical Image Processing

Take control of the variety of imaging equipment that is present in today's medical environment. The ability to standardize and control video signals is essential, especially with the need to share a common video display system. Control OR can scale, format, and split video signals based upon what is needed. The system features 10 input and 5 output capability.

Key Features

- Simultaneous distribution of signal sources to one or more displays
- Input/output connections using analog, digital and fiber standards
- Picture-in-picture, picture-by-picture, picture-on-picture capabilities
- Configure video distribution via touch screen tablet interface
- Upgrades and maintains signal integrity

Harness the power of Control OR, wirelessly, throughout the operating room, by using the intuitive interface on a touch screen tablet. A secure docking station is available to hold and charge the tablet.

Wall Mount
Display Monitors

IP Address

Boom or Stand
Display Monitors

Destination Video Outputs
Route and Switch · PIP layouts · Freeeze
Color Correction · Single cable connection

Tablet with
Control Interface

Source Video Inputs
Automatic Recognition · Conversion · Signal Upgrade
10 source capability

Acquired Video Sources

Control OR

Input signal substitutions available   *Output signal substitutions available*

General Specifications

Item	Description
Input - standard configuration	DVI-D x 2, VGA (D-sub) x 1, Component (BNC) x 1, C-Video (BNC) x 2, S-Video (DIN) x 2, SD/HD/3G-SDI (BNC) x 2
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Output - available options	SD/HD/3G-SDI (BNC), Optical Fiber (SC)
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OSD language	English
Power	AC 100~240V / 50~60Hz , 2A(max)
Serial communication	RS-232C 115200 baud Rx
Network	Ethernet TCP/IP 10/100 base TX (Auto sensing)
Compliance & Certifications	FDA Class I, UL 60601-1, CAN/CSA-C22.2 No.601.1-M90, FCC Part 15 Class B, MDD Class I, IEC60601-1, EN60601-1-2, CCC & IEC60950-1
Size (W x D x H)	437 (17.205)x 380 (14.961) x 139.5 (5.492) mm/(inch)

The tablet can be disengaged from the mounted docking station for portable control.

Control OR's small footprint allows it to be positioned for maximum efficiency.

inspire
Healthcare

VisionMed

HIGH DEFINITION LIVE SURGERY TRANSMISSION

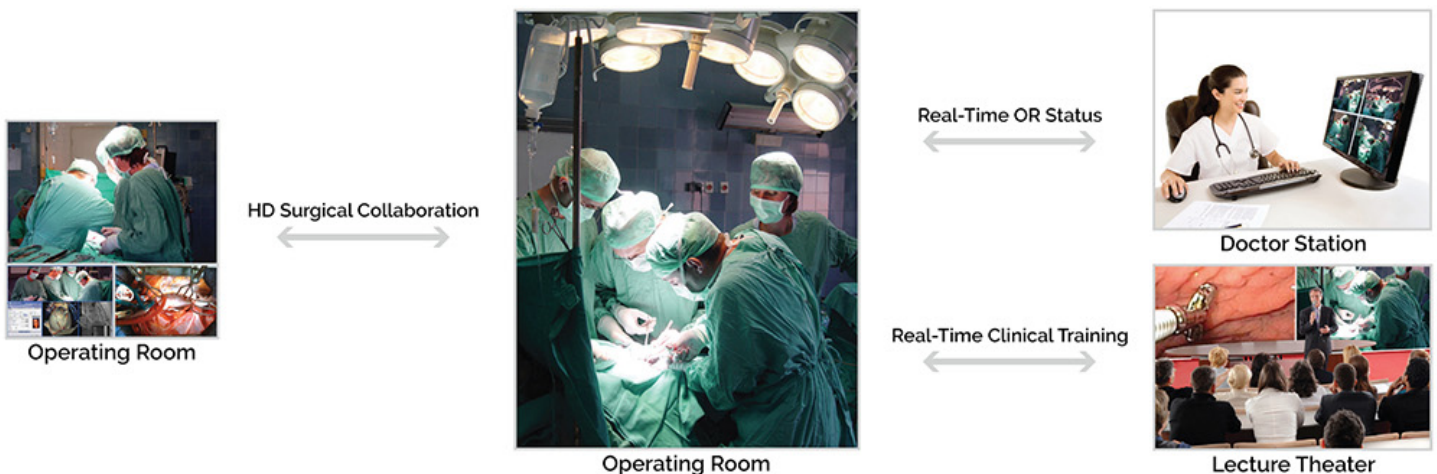### Real-Time Video and Audio to Connect ORs and Auditoriums

Intelligent OR is incomplete without connecting Auditorium or Lecture Theater of a hospital to its network. VisionMed is fully capable of transmitting & streaming the desired video feed on the hospital network to conduct workshops, CME within the hospital. Streaming through a secure network connection and encrypted video streams gives the surgeons confidence that their patient health information is protected, thus allowing an unlimited amount of health informatics to be exchanged for an improved collaboration experience.

Live Streaming of Medical Events

When reaching out to a mass audience with highly technical medical content, viewers demand the highest quality possible. The streaming technology should be "invisible" to the audience, and high value assets need to be consistent, accessible and compelling. This is a most effective streaming system and delivers high quality with low latency and simplifies end-to-end control of live media delivery. The inbuilt high quality two- way audio communication & real time video makes it a "Must- Have" tool for Medical events

Bring efficiency to the surgical team and hospital operations

Hospitals are 24/7 organizations that rely on the most efficient use of valuable resources, such as a surgeon's time and the use of operating rooms (ORs). Given the ability to view directly into any OR with VisionMed, authorized nurses can easily monitor ORs and schedule cleaning crews to prep the room for the next patient. Surgical teams can get in and out of the OR without any time lost waiting.

Operating Room

HD Surgical Collaboration

Operating Room

Real-Time OR Status

Doctor Station

Real-Time Clinical Training

Lecture Theater

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inspire
HEALTHCARE
THE OR PEOPLE

VisionMed

VisionMed Radiology solutions have been designed keeping in mind the financial savings for radiology processing costs when using Apple computer-based systems. It can help small hospitals to get into PACS with minimal cost. A small hospital that can't afford a PACS can access images through Mac, download OsiriX MD, and look at images. The powerful medical imaging software OsiriX MD with applications such as VMware Fusion and others can run any windows applications needed and is less expensive and better than any diagnostic workstation.
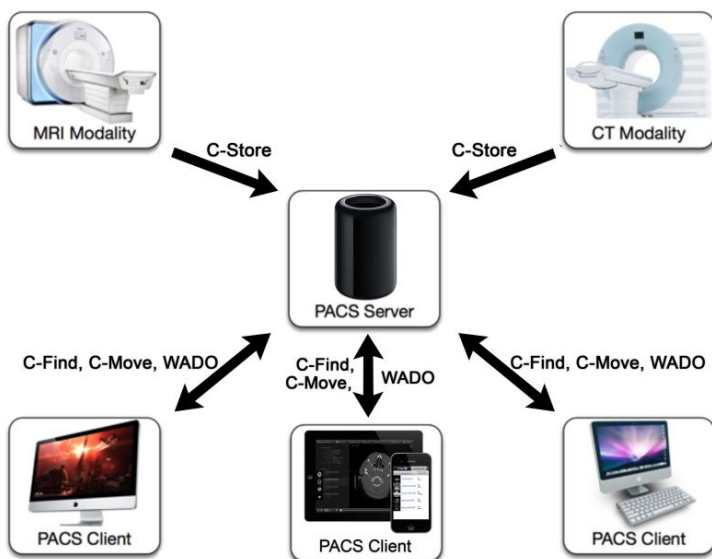

The Solution

- The Central PAC Server.
- OsiriX MD 64 bit PAC Server software for diagnostic imaging.
- Network & Raid Storage.
- Integration of modalities.

Salient Features

- Automated image transfer without human intervention.
- WEB access on I-Phone, I-Pad and Windows PC.
- Advanced post processing at each end possible.
- Exclusive innovative technique for 3D/4D/5D navigation
- No security compromise and no more irritating virus issues.
- Remote printing of reports without using costly IP Printer.
- Auto workload distribution to other junior doctors from server.
- Sharing studies with referring physician on demand.
- Flawless teleradiology solution for image transmission.
- Small recurring cost

inspire Healthcare

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VisionMed

OsiriX Radiology Solutions with Apple
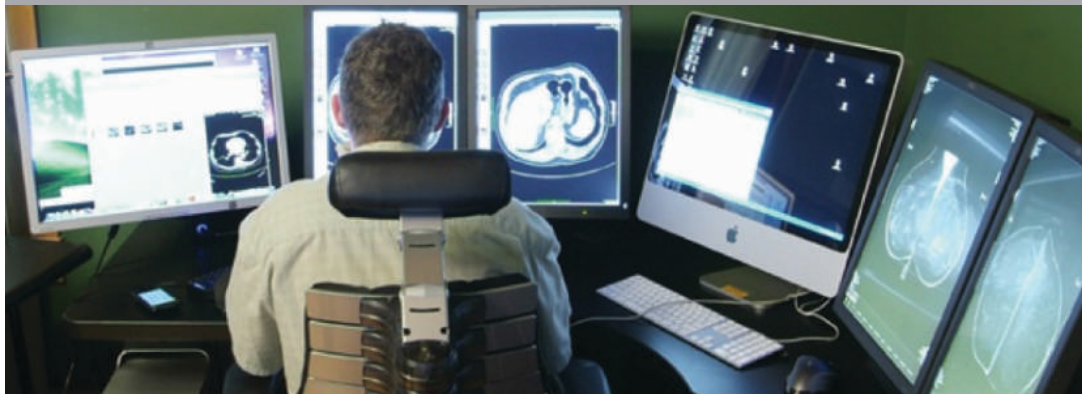
Ultrafast performance

Intuitive interactive user interface

FDA & CE certified

OsiriX MD is the complete edition of OsiriX. With ultrafast performance and an intuitive interactive user interface, it is the **most widely used medical images viewer in the world**. It fully supports the DICOM standard for an easy integration in your workflow environment and an open platform for development of processing tools. It offers **advanced post-processing techniques in 2D and 3D**, exclusive innovative techniques for **3D & 4D navigation**, including PET-CT and SPECT-CT fusion, and a complete integration with any PACS server. It can import and display any medical images (DICOM files) from CD, DVD, USB stick and others, OsiriX MD **supports 64-bit computing and multithreading** for the best performances on the most modern computers.

OsiriX MD is **FDA, CE** and **ANVISA** certified and validated for clinical use in medicine.

VisionMed OsiriX workstations have been designed keeping in mind the financial savings for radiology processing costs when using **Apple** computer-based systems. It can help small hospitals to get into PACS with minimal cost. A small hospital that can't afford a PACS can access images through Mac, download OsiriX MD, and look at images. The powerful medical imaging software OsiriX MD with applications such as VMware Fusion and others can run any windows applications needed and is less expensive and better than any diagnostic workstation.

"The unique work flow management tools make OsirixPacs a truly outstanding PACS. Ease of use, reliability and remarkable pricing make OsirixPacs an obvious choice for hospitals and imaging centers."

Andrew Lee, M.D., Chino Hills, CA

"A great PACS system with outstanding support. Osirix has successfully met the IT needs of our imaging facility."

Sheena Shimma, Owner,Northwest Prenatal Ultrasound

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MEDICAL DIVISION

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 Authorised Reseller

Record Video the Easy Way!

VisionMed makes recording video easier than ever. You can record high definition video from virtually any medical video device including endoscopes, arthroscopes, surgical cameras, ultrasounds, etc. Records upto 1080p video into USB stick or Hard Disk by one click, PC not needed. With microphone input, it allows surgeon to record live voice from microphone with video together.

Highest Quality Video. VisionMed high performance hardware and advanced compression algorithms provide the medical industry's clearest videos and images. Every pixel of every frame is captured with the truest possible fidelity.

Universal Compatibility. VisionMed recorders can be paired with virtually all makes and models of medical cameras and monitors. Videos recorded with VisionMed can be viewed on any modern computer, laptop or tablet.

Compact File Size. The high-definition VisionMed also saves video in the H.264/MP4 format that offers the industry's highest quality HD images with the most compact file size.

Rugged Case. The unit is protected by a rugged metal case for use in demanding medical environments.

Interface	:	USB 2.0 Host.
Video Input	:	HDMI, Component Video, Composite.
Storage Media	:	USB Flash Disk, Portable Hard Disk,
Resolution	:	1920 x 1080 (60p).
Recording	:	H.264/MP4, schedule recording supported.
Power Supply	:	USB B, DC 5V / 2A.

By combining the latest technology with ease-of-use and an affordable price tag, VisionMed recorders have become a "must have" tool for doctors and OEMs.